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**SITE INVESTIGATION REPORT/ INTERIM REMEDIAL ACTION WORKPLAN  
VETERANS MEMORIAL PARK  
BLOCK 260, LOT 15.02  
SOUTH PLAINFIELD, NEW JERSEY  
CASE NUMBER 01-08-07-1845-23  
PMK GROUP NO. 0502014**


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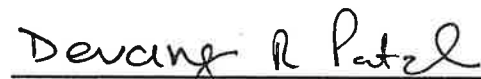
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## **1.0 INTRODUCTION**

This report presents the results of the Site Investigation (SI) performed by **PMK Group (PMK)** at the Veterans Memorial Park site (herein referred as "the Site") in South Plainfield, New Jersey. The Site is identified as Block 260, Lot 15.02 on the Tax Maps of the Borough of South Plainfield, Middlesex County, New Jersey. All SI activities were performed in accordance with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) and also in accordance with the approved scope of work identified in Memorandum #1, dated July 31, 2002, prepared by PMK.

A Site Location Map is presented as Plate 1. In addition, a Site Plan indicating pertinent site features is presented as Plate 2.

## **2.0 PROJECT BACKGROUND**

### **2.1 USEPA FLOODPLAIN SOIL AND SEDIMENT INVESTIGATION REPORT**

The USEPA field investigation team collected 34 soil samples to investigate the floodplain area down gradient of the Cornel Dublier Superfund Site. The soil and sediment samples collected from the flood plain area were analyzed for PCBs. All soil samples were collected approximately zero to two inches below surface grade (bsg). A copy of the Roy F. Weston report dated January 17, 2000, is presented as Appendix A.

### **2.2 PRELIMINARY INVESTIGATION PERFORMED BY THE USEPA**

On August 7, 2001, the New Jersey Department of Environmental Protection (NJDEP) received an anonymous phone call from a resident of South Plainfield; a complaint concerning a tar like substance that was emanating from the ground surface was filed. In response, the US Environmental Protection Agency (USEPA) collected soil samples from the suspected area and forwarded the samples for poly-chlorinate biphenyls (PCB) analysis. USEPA personnel verbally communicated this information and the PCB analytical results to Mr. Michael Zushman, Director of Emergency Response team, Borough of South Plainfield. Mr. Zushman informed PMK that he was notified by the USEPA that the soil samples collected for PCB analysis did not reveal concentrations above the applicable Soil Cleanup Criteria (SCC). The results of the USEPA investigation were not available for PMK's review.

### **2.3 PRELIMINARY ASSESSMENT**

In addition to the USEPA investigation of the Site, the Borough of South Plainfield retained **PMK** to perform a Preliminary Assessment (PA) of the Site. A PA was performed in accordance with N.J.A.C 7:26E -3.2. On April 15, 2002, a PA report for the Site was prepared and submitted to the NJDEP. The completion of the PA resulted in the identification of seven areas of concern (AOC) which are listed below:

**AOC #1 – Historic Fill or any Other Fill Material:** - Based on a review of the available Historical Topographical Maps and municipal personnel interviews, the property and adjacent properties consisted of low-lying, wetland areas, which have been reportedly filled in to raise grade and allow for municipal use. PMK recommended collecting soil samples to verify the presence and to identify potential historic fill contaminants present at the site.

**AOC #2 – Electrical Transformers:** Our site reconnaissance identified one transformer mounted on a utility pole on the property. As no leaking or staining was noted on the transformer, PMK recommended no further investigation of this AOC.

**AOC #3 Areas of Stressed Vegetation:** Several areas of stressed vegetation were noted throughout the northern and central portions of the property. PMK recommended collecting soil samples within the limits of the stressed areas in an attempt to identify potential impacts in the underlying soils.

**AOC #4 Areas which receive flood or storm water from potentially contaminated areas:** - Based upon field observations and review of the Site Report by Environmental Data Resources, Inc, the Site is depicted as being within the 100 year flood zone. It should also be noted that three contaminated sites have been reported up gradient of the Site. PMK recommended further investigation of this AOC in an attempt to identify potential environmental impacts to the Site from offsite sources.

**AOC #5 Black Substance emanating from the Ground:** - During our site reconnaissance, sections of the grass field had areas where a black "tar-like" substance had emanated from the ground. PMK recommended further investigation of this AOC to attempt to identify the noted substance and to evaluate the potential for the substance to impact the Site.

**AOC #6 Sink Holes:** - During our site reconnaissance several sinkholes were noted on the property. PMK recommended performing a geophysical survey of the area to identify any subsurface metallic anomalies, including, but not limited to, buried drums. The need for further soil investigations will be determined based on the results of the geophysical survey.

**AOC #7 Discolored or Spill Areas:** - There are two areas in close proximity to one another, where a blue staining and a black powder-like substance were observed on the ground. During a second visit, the blue substance was identified as the remains of a melted plastic drum, used throughout the Site as garbage cans and the black powder is the ash from a charcoal barbecue grill used in the picnic area. PMK recommended these areas be cleaned and the debris be properly disposed.

#### **2.4 LIMITED SITE INVESTIGATION**

The Limited Site Investigation (LSI) activities were performed to evaluate AOC #1, AOC #3, AOC #5 and AOC #6 identified on the property in the PA Report, dated April 15, 2002. AOC #2, and AOC #7 were not investigated as a no further investigation recommendation was made in the PA report. AOC# 4 was not investigated because the information requested through the freedom of information was not available for PMK's review.

The LSI consisted of the advancement of seven exploratory soil boring and the collection of five (5) representative soil samples for priority pollutant plus a forward library search of forty non-targeted compounds (PP+40). The LSI report was submitted to the Borough of South Plainfield on April 12,

2002. Based upon the results of the LSI activities and a review of the laboratory analytical results, the following was concluded:

**AOC #1 Historic Fill or any Other Fill Material:**

The results of soil samples collected during the investigation of AOC #3, AOC #5 and AOC #6 were utilized to determine the quality of fill. Based on our visual observations and a review of the analytical test results, contaminated historic fill identified within the study area. PMK recommended further investigation for this AOC.

**AOC #3 Areas of Stressed Vegetation:**

Soil sample B-6 was collected from the area of stressed vegetation in an attempt to investigate the rationale behind the differences in vegetation on the property.

Based upon a review of the soil sample analytical results for soil sample B-6, the analytical results revealed concentrations of pesticides (4,4-DDD and 4,4-DDE and Arsenic) above the most stringent NJDEP SCC. PMK recommended a Site wide investigation of this AOC to determine the extent of contamination at the Site.

**AOC #5 Black "tar-like" substance emanating from the Ground:**

Three soil samples (B-2, B-4 and B-5) and a gas chromatograph (GC) fingerprint sample (B-2GC) were collected from the stained areas and unknown substance. The samples were collected in an attempt to evaluate the presence of any contamination and to identify the black "tar-like" substance emanating from the ground and present in large quantities below the surface.

Based upon a review of the laboratory analytical results for soil samples B-2, B-4 and B-5, the presence of targeted compounds was detected in some samples above the most stringent NJDEP SCC. Specifically, soil sample B-2 revealed 3,3-Dichlorobenzidine, PCBs, Dieldrin and Beryllium; soil sample B-5 revealed several poly-aromatic hydrocarbons and Beryllium concentrations were detected in excess of the most stringent NJDEP SCC. No targeted compounds were revealed in excess of the most stringent NJDEP SCC in soil sample B-4. The GC fingerprint analysis indicated the substance is not a petroleum distillate product; the exact identity has not been determined.

PMK recommended further investigation of this AOC.

**AOC #6 Sink Hole Areas:**

One soil sample was collected in an attempt to determine if any contaminants are buried below the observed sinkholes. Based on a review of the soil sample results of sample B-1, no targeted compounds were detected in excess of the NJDEP SCC, however PMK recommends a test pit investigation of the area in order to further investigate the sinkholes.

### **3.0 ENVIRONMENTAL SETTING/SITE HISTORY**

#### **3.1 LAND USE**

The subject site is located within a residential area of South Plainfield, New Jersey. The Borough Park consists of a ball field, basketball court, playground, gazebo and picnic benches. Surrounding properties include a stream followed by municipal building to the north, residential properties to the east, the Bound Brook and wetlands followed by railroad tracks to the south and west.

The Site Location Map, Plate 1, presents the general location and development of the land area in the vicinity of the subject site.

#### **3.2 SITE TOPOGRAPHY**

A review of the Plainfield, N.J. Quadrangle USGS Topographic Map (7.5 minute series) dated 1955 (photo-revised 1981), indicates the Site topography is relatively flat. Ground surface elevation at the Site is approximately 40 feet above mean sea level (msl). The regional overland drainage appears to be directed in a westerly direction, toward the Bound Brook, which is located just west of the property.

The topography of the site and adjacent areas is presented on a portion of the Plainfield, N.J. Quadrangle USGS Topographic Map (7.5 minute series) dated 1955 (photo-revised 1981), presented as Plate 1.

#### **3.3 GEOLOGY**

##### **3.3.1 Regional Geology**

A review of the Bedrock Geologic Map of Northern New Jersey, 1996, indicates that the Lower Jurassic/Upper Triassic Period Passaic Formation ( $J_{Trpms}$ ) underlie the Site. This formation is predominantly sandy mudstone that is reddish-brown to brownish-red, massive, silty to sandy mudstone and siltstone, which are bioturbated, ripple cross-laminated, and interbedded with lenticular sandstone.

##### **3.3.2 Suspected Groundwater Flow Regime**

Based on our review of the site area and the presence of nearby surface water bodies (i.e. the Bound Brook), it is estimated that groundwater flow direction is in a general westerly direction, toward the Bound Brook, located approximately 10 feet west of the property. The estimated groundwater flow direction is utilized for the purpose of establishing potential off-site sources that may impact the site and the potential for off-site migration of contamination identified at the subject Site. Due to local variations and groundwater flow resulting from various natural and man-made factors, actual groundwater flow at the Site and adjacent sites may vary.

#### **3.4 HISTORICAL SITE USAGE**

As detailed in the Preliminary Assessment (PA) Report, dated April 15, 2002, PMK reviewed historic Sanborn Fire Insurance Maps, a Site Report, Chain-Of-Title Information, Local, State, and Federal government files as well as other reasonably ascertainable sources for the purpose of obtaining information about current, as well as historic site activities. These documents revealed the following information:

#### 3.4.1 Site History & Operations

The Borough of South Plainfield currently owns the Site. The aerial photographs of the Site indicate that a baseball field has existed on the Site since at least 1954. There are indications on the 1954 aerial photograph that portions of the northwest section of the Site were used for dumping.

The Site is presently occupied by Veterans Memorial Park, which consists of a baseball field with lights, basketball court, playground, picnic areas, bathrooms and an electrical shed. Most of the property is grass covered except for a stone parking area off of Elm Street and an asphalt paved walkway that leads across the Site. Several sinkholes were noted scattered through out the Site, particularly in the northern section. There is a black "tar-like" substance emanating from the ground in several areas in the north central portion of the property, covering approximately 18,000 square feet. However, many areas of stressed vegetation were also noted throughout the grass areas in the vicinity of the unknown substance. Exposed tiles which may contain asbestos were observed in the embankment of the dry pond area in the southwestern portion of the Site.

#### 3.5 SITE SPECIFIC SUBSURFACE CONDITIONS

During the SI activities at the Site, a continuous log was recorded of the encountered subsurface materials. The underlying soils encountered in the soil boring and test pits at the Site were observed to consist of brownish red silty sand with trace gravel from a depth of 0 to 6 feet below surface grade (bsg) with historic fill materials encountered at depths between 0.5 to 6.5 feet bsg. Grey/green mottled clay was observed at depths from 4.5 feet to approximately 8 feet bgs. Groundwater was encountered at approximately 7.0 during the test pits explorations.

#### 4.0 EMERGENCY ACTIONS

On July 17, 2002, Mr. Robert Spiegel, President of Edison Wetlands Commission, pointed out two areas of concern: (1) a "tar-like" substance emanating from the ground; which was previously identified as a AOC #5 by PMK and (2) suspected asbestos containing material (ACM), was discovered along the embankment of the dry pond area: The tiles and sheets, potentially ACM, identify by Mr. Spiegel, was not included in PMKs previous study area. However, **AOC #8 - Asbestos Containing Material (ACM)** is included as part of the present study.

In addition, Mr. Spiegel collected two sediment samples from the dry pond area (outside the PMK study area) and forwarded them to a laboratory for priority pollutant analysis. Please note that PMK requested copies of analytical results from his office several times for NJDEP submission. At present time PMK is waiting for receipt of the analytical results from the Edison Wetland Association.

The Middlesex County Health Department (MCHD) was at the Site to investigate the area of concerns identified. Mr. Thomas Sikorski of the MCHD informed PMK that they collected two confirmatory soil samples to investigate the unknown black "tar-like" substance and gathered two bulk material samples from the visually exposed tiles in the embankment of the dry pond area. A copy of the MCHD investigations and the analytical results is included as Appendix B.

On July 19 and 23, 2002, the NJDEP Bureau of Field Operations (BFO) responded to the Site in response to the Borough's request. The NJDEP representatives collected field samples of the

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black "tar-like" substance and potential ACM suspect flooring tiles for visual inspection. Based on the findings, the Borough of South Plainfield officials decided to close the park temporarily and signage was posted.

On July 31, 2002, PMK prepared and submitted Memorandum #1 to the NJDEP for review and approval. Memorandum #1 included an emergency scope of work (SOW) for the Site. The SOW was approved by the NJDEP on August 6, 2002. A copy of the NJDEP letter is presented as Appendix C.

#### **4.1 SUPPLEMENTAL INVESTIGATIONS AS A RESULTS OF EMERGENCY ACTIONS (JULY 17, 2002)**

On July 23, 2002, a representative of PMK collected a sample of the black "tar-like" substance and gathered four bulk material samples of the suspected ACM. The sample of the black "tar-like" substance, GC-2, was collected from the surface and was forwarded to Chemtech Laboratories (NJ Lab. ID #12013), of Mountainside, New Jersey (Chemtech) for gas chromatograph (GC) fingerprint analysis and mass spectrometer (MS) analysis. Standard chains of custody procedures were implemented to track the samples.

The four bulk material samples were gathered from the bank of the wetlands transition zone near the dry pond area to confirm the presence of asbestos containing materials in the observed tiles. The bulk material samples that were gathered were analyzed for asbestos content in accordance with the USEPA- approved petrographic method utilizing polarized light microscopy (PLM) with dispersion staining (EPA Method for Determination of Asbestos in Bulk Building Material, EPA 600/R- 93/116).

On July 24, 2002, a representative of PMK collected two confirmatory sediment samples, SS-1 and SS-2, from the dry pond area in the vicinity of the potential ACM tiles to evaluate the area identified by Mr. Spiegel. The sediment samples were forwarded to Chemtech for PP+40 analysis. Standard chains of custody procedures were implemented to track the samples. The sediment samples were collected outside the limits of the study area to confirm Mr. Spiegel's investigation however, this area of concern is not address in this investigation.

#### **4.2 ANALYTICAL RESULTS OF SUPPLEMENTAL INVESTIGATION**

A review of the analytical results for the grab sample, GC-2, bulk material samples and sediment samples SS-1 and SS-2 collected from dry pond area revealed the following:

##### **GC Fingerprint Analysis:**

The results of the laboratory analysis performed on sample GC-2 for GC/MS analysis revealed the substance is a phenolic-based compound. However no specific compound was identified in the GC finger print analysis. The complete laboratory analytical data report is presented in Volume III – P3425.

##### **Bulk Material Samples, July 23, 2002**

The results of the laboratory analysis performed on bulk material samples: 0502014-01, 0502014-02, 0502014-03 and 0502014-04 indicated that asbestos containing material was present in three of the samples, specifically 0502014-01, 0502014-02, 0502014-03. The results are summarized in the table below and the asbestos laboratory certificate is presented as Appendix D.

SAMPLE ID#	MATERIAL DESCRIPTION	SAMPLE LOCATION	ASBESTOS CONTENT
0502014-01	Grey/ tan fibrous heterogeneous	Bank of wetland	6.3%
0502014-02	Tan Fibrous Heterogeneous	Bank of wetland	18%
0502014-03	Brown Fibrous Heterogeneous	Bank of wetland	15%
0502014-04	Brown/ Black Fibrous Heterogeneous	Bank of wetland	0%

#### Sediment Samples SS-1 and SS-2

The results of the laboratory analysis performed on soil samples SS-1 and SS-2 for PP+40 revealed several poly-aromatic hydrocarbons and PCB concentrations in excess of the NJDEP most stringent SCC. Specifically, sediment sample SS-1 revealed the following compounds at concentrations in excess of the most stringent NJDEP SCC: benzo(b)fluoranthene (1.2 mg/kg), benzo(k)fluoranthene (0.93 mg/kg), benzo(a)pyrene (1.0 mg/kg) and PCB- Aroclor-1254 (7.3 mg/kg) and sediment sample SS-2 revealed: benzo(a)anthracene (1.5 mg/kg), benzo(b)fluoranthene (1.5 mg/kg), benzo(k)fluoranthene (1.7 mg/kg), benzo(a)pyrene (1.8 mg/kg) and PCB- Aroclor-1254 (6.7 mg/kg). The remaining contaminant concentrations in samples SS-1 and SS-2 were at concentrations below the most stringent NJDEP SCC or below the laboratory mean detection limit (MDL). The results of the laboratory analyses performed on the sediment samples collected during this investigation are summarized on Table 2 and the complete laboratory analytical data report is presented in Volume II – P3457.

#### **5.0 SCOPE OF WORK**

The purpose of our Site Investigations (SI) was to perform an evaluation of existing soil conditions and to identify the types of historic fill present at the Site. The additional SI activities were focused specifically to address the four main area of concern highlighted below:

##### **AOC #1 - Historic fill**

AOC #2 – Electrical Transformer

AOC #3 – Stressed Vegetation

**AOC #4 – Areas which received flood or storm water from potentially contaminated areas (PCBs Contaminated areas)**

**AOC #5 - Black “tar-like” substance commonly know as Black Ooze**

AOC #6 – Sink Holes

AOC #7 - Discolored or Spill Areas

**AOC #8 - Asbestos Containing Material (ACM)**

The SI activities were conducted in accordance with the NJDEP response letter dated August 6, 2002 and N.J.A.C. 7:26E. The NJDEP response letter is presented as Appendix C.

## **6.0 TEST PIT INVESTIGATION**

Between August 7, 2002 and August 13, 2002, PMK representatives were onsite to conduct test pit investigations at the Site. The test pit investigation activities were performed to identify and quantify the historic fill (AOC #1), the black "tar-like" substance (AOC #5) and ACM material (AOC #8) at the Site. A total of forty-one (41) test pits were excavated utilizing a Case 580 Super K backhoe by Aurora Environmental, Inc. (Aurora) of Union Beach, New Jersey. The test pit investigation was halted in the western portion of the property based on unknown location of the property boundary and current owner.

### **6.1 VISUAL CLASSIFICATION OF AOC #1, AOC #5 AND AOC #8:**

Forty-one test pits were advanced at the Site to classify and identify the limits of the Historic fill (AOC #1), black "tar-like" substance (AOC #5) and ACM (AOC #8). All fieldwork was performed under the direct supervision of a subsurface evaluator from PMK. Our representatives identified test pit locations in the field, maintained a continuous log of the explorations as the work proceeded and supervised the test pit procedures to evaluate the subsurface conditions. The limits of the black "tar-like" substance and ACM material, as determined during the test pit investigations, are depicted on Plate 5.

During the advancement of the test pits; six test pits revealed strong odors resembling phenol and/ or naphthalene compounds based on prior professional services. Specifically test pits: TP-4, TP-6, TP-8, TP-10, TP-22 and TP-25 were identified as yielding these odors.

A detailed description of the encountered materials is provided in the Test Pit Logs, presented as Appendix E. The encountered soil has been visually classified in accordance with the Unified Soil Classification System.

#### **AOC #1 - Historic Fill**

The test pit investigations identified historic fill in virtually all test pits advanced. The historic fill was encountered at depths ranging from 0.5 feet bsg to a depth of 6.5 feet bsg. Generally, the historic fill consisted of soil mixed with tiles, glass, asphalt, brick, concrete debris and black "tar-like" substance. However other historic fill material constituents were encountered and are specified on the individual test pit logs.

#### **AOC # 5 - Black "tar-like" substance**

The unknown black substance was identified in large quantities in test pits: TP-8, TP-19, TP-22 and TP-25. In addition, test pits TP-1, TP-3, TP-10 and TP-30 were identified as having black globules, which may be related to the unknown substance. Based on our visual observation, the black "tar-like" substance was encountered at depths ranging from 0 to 4.5 feet bsg. The approximate limits of the black "tar-like" substance are presented on Plate 5.

#### **AOC #8 - Asbestos Containing Material (ACM)**

Based on our visual observation, the ACM was identified in test pits: TP-1, TP-2, TP-6, TP-11, TP-13, TP-23, TP-24, TP-28, TP-29 and TP- 30. ACM was identified at depths ranging from 0.5 to 5 feet bsg. Please note that seven test pits contained a layer of potential asbestos containing tiles similar to the confirmed asbestos containing tiles observed in the embankment near the dry pond



area. In addition to visual observations, PMK representatives gathered nine bulk material samples of the suspected asbestos containing material from the test pits.

## **6.2 ANALYTICAL CLASSIFICATION OF AOC #1**

In addition to visually classifying the encountered soil, ten soil samples from seven different test pits were collected to classify the historic fill. All soil samples were collected in accordance with the requirements of N.J.A.C. 7:26E-3.6(a)(3)(4) and the protocols set forth in the NJDEP *Remediation of Contaminated Soils* guidance document. Soil samples TP-4, TP-4d, TP-6, TP-6d, TP-10, TP-10d, TP-13, TP-31, TP-33 and TP-34 were collected from the named test pits and analyzed for PP+40. The results of the laboratory analyses performed on the soil samples collected during this investigation are summarized on Table 3 and the complete laboratory analytical data for the test pit soil investigations is presented in Volumes III and IV. The asbestos bulk material laboratory certificate is presented as Appendix D.

- Test Pit TP-4 was excavated to a depth of 8 feet bsg. Staining and odors were noted. Fill material consisting of interior car parts, carpet, wood, bricks and stained sandy soil was encountered from 0.5 to 4.0 feet bsg. Soil sample TP-4 and TP-4d were collected at a depth of 3.5-4.0 feet and 7.0-7.5 feet bsg respectively from stained soil. The volatile organics portion was collected from this test pit at the same depth.
- Test Pit TP-6 was excavated to a depth of 7.5 feet bsg. Staining and odors were noted. Fill material consisting of asphalt, white fibrous material, tiles, glass jars, copper wire, wood, brick and stained sandy soil was encountered from 1.5 to 6.5 feet bsg. Soil sample TP-6 and TP-6d were collected at depths of 2.5-3.0 feet and 6.0-6.5 feet bsg respectively. Soil samples TP-6 and TP-6d were obtained from the petroleum odorous area. The volatile organics portion was collected from this test pit at the same depth.
- Test Pit TP-10 was excavated to a depth of 5.0 feet bsg. A phenol like odor was noted at 2.0 feet. Fill material consisting of globules of black substance and a stained green sandy soil was encountered from 1.0 to 3.0 feet bsg. Soil samples TP-10 and TP-10d were collected at depths of 2.0-2.5 feet and 3.5-4.0 feet bsg, respectively. Soil sample TP-10 was collected from the stained area. The volatile organics portion was collected from this test pit at the same depth.
- Test Pit TP-13 was excavated to a depth of 5.0 feet bsg. Fill material consisting of metal, wood, glass and a pocket of tiles on the north section of the test pit were encountered from 1.0 to 3.0 feet bsg. Soil sample TP-13 was collected at a depth of 1.5-2.0 feet bsg. The volatile organics portion was collected from this test pit at the same depth.
- Test Pit TP-31 was excavated to a depth of 6.5 feet bsg. Fill material consisting gray sand, some silt and gravel was encountered from 1.0 to 2.0 feet bsg. Soil sample TP-31 was collected at a depth of 1.0-1.5 feet bsg. The volatile organics portion was collected from this test pit at the same depth.

- Test Pit TP-33 was excavated to a depth of 5.5 feet bsg. Fill material consisting of gray brown sand and 10 % pieces of glass and slag were encountered from 1.0 to 2.0 feet bsg. Soil sample TP-33 was collected at a depth of 1.0-1.5 feet bsg. The volatile organics portion was collected from this test pit at the same depth.
- Test Pit TP-34 was excavated to a depth of 4.0 feet bsg. Fill material consisting of brown sand with pieces of glass was encountered from 1.0 to 2.0 feet bsg. Soil sample TP-34 was collected from fill material at a depth of 1.0-1.5 feet bsg. The volatile organics portion was collected from this test pit at the same depth.

### **6.3 ANALYTICAL RESULTS OF AOC #1 INVESTIGATION**

A review of the analytical results of the soil samples collected during the test pit investigations revealed the following:

#### **Volatile Organic and Pesticide Compounds**

A review of the VO+10 and pesticides analytical results of test pit soil samples (TP-4, TP-4d, TP-6, TP-6d, TP-10, TP-10d, TP-13, TP-31, TP-33, TP-34) revealed that targeted compounds were not in excess of the most stringent NJDEP SCC.

#### **Base Neutral Compounds.**

The results of the laboratory analysis performed on soil samples TP-4 for PP+40 revealed concentrations of Base neutral compounds in excess of the most stringent NJDEP SCC. Specifically, benzo(a)pyrene was detected in sample TP-4 at 0.7 mg/kg in excess of the most stringent NJDEP SCC.

#### **Priority Pollutant Metals**

The results of the laboratory analysis performed on soil samples TP-6, TP-6d, TP-13 and TP-31 revealed PP metal concentrations in excess of the most stringent NJDEP SCC. Specifically, concentrations of arsenic were revealed in samples TP-6 at 41.4 mg/kg, TP-6d at 46.7 mg/kg and TP-31 at 37.9 mg/kg; concentrations of Beryllium were revealed in soil samples TP-6d at 2.4 mg/kg and TP-13 at 3.3 mg/kg; and concentrations of lead were revealed in soil sample TP-6d at 566 mg/kg in excess of the NJDEP SCC.

#### **PCBs**

The results of the laboratory analysis performed on soil samples TP-4, TP-6 and TP10 revealed PCB concentrations in excess of the most stringent NJDEP SCC. Specifically concentrations of PCB (aroclor-1254) were detected at 2.6 mg/kg in sample TP-4, 2.4-mg/kg in sample TP-6d and 0.56 mg/kg in sample TP-10.

The results of the laboratory analysis performed on soil samples TP-4d, TP-10, TP-10d, TP-33 and TP-34 for PP+40 revealed that all targeted compounds were below the most stringent NJDEP SCC.

### **6.4 ANALYTICAL CLASSIFICATION OF AOC #8**

The bulk material samples gathered from the test pits were analyzed for asbestos content in accordance with the USEPA- approved petrographic method utilizing polarized light microscopy

(PLM) with dispersion staining (EPA Method for Determination of Asbestos in Bulk Building Material, EPA 600/R- 93/116). Samples were collected during the test pit investigation from six different test pits to confirm the presence of asbestos containing material noted during visual observation. In addition, black "tar- like" substance was sampled for asbestos content analysis

The results of the laboratory analysis performed on the nine-bulk material samples indicated that asbestos-containing material was present in eight of the nine samples at levels of 10% to 18 % asbestos. Sample 0502014-080902-06 was the only sample gathered that was negative for asbestos. The bulk material (asphaltic compound) samples and results are summarized below:

PMK SAMPLE ID#	MATERIAL DESCRIPTION	SAMPLE LOCATION	ASBESTOS CONTENT
0502014-080902-01	Tan, homogeneous, cementitious panel	TP-28	15%
0502014-080902-02	White, Homogeneous, Matric Block Debris	TP-1	18%
0502014-080902-03	Tan, homogeneous, Cementitious panel	TP-1	15%
0502014-080902-04	Tan, Homogeneous, Cementitious Panel	TP-2	15%
0502014-080902-05	White, Homogeneous, Cementitious Panel	TP-2	18%
0502014-080902-06	Black, Homogeneous, Asphaltic Compound	TP-6	0%
0502014-080902-07	Beige, Homogeneous, Fibrous Debris	TP-6	12%
0502014-080902-08	White, Homogeneous, Fibrous Debris	TP-23	10%
0502014-080902-09	White, Homogeneous, Fibrous Debris	TP-24	15%

The criterion used to determine the status of a suspect material as "asbestos-containing" is the EPA criterion that the material is determined to contain greater than 1% by weight of actinolite, amosite, anthophyllite, chrysotile, or tremolite asbestiform fibers (40 CFR 61, Subpart M).

## **7.0 AOC #4 AREAS WHICH RECEIVE FLOOD OR STORM WATER FROM POTENTIALLY CONTAMINATED AREAS (PCBS CONTAMINATED AREA)**

### **7.1 AOC #4 - SOIL INVESTIGATIONS, AUGUST 1, 2002**

At the request of the Mayor and City Council of South Plainfield, on August 1, 2002, PMK representatives were onsite to investigate potential PCB contamination in surficial soils at the Site. A total of eight (8) surface soil samples were collected inside the fenced area, parallel to the park boundary along the residential properties, located on Kaine Avenue (herein referred to as the northeast border of the park). Soil samples R-1 through R-8 were collected from 0 to 6 inch interval bsg and forwarded to a NJDEP approved laboratory for PCB analysis.

A subsurface evaluator from PMK performed all fieldwork. Our representative identified soil sample locations and collected the soil samples in accordance with per NJ.A.C. 7:26E. The soil sample locations are depicted on Plate 4.

## **7.2 ANALYTICAL RESULTS, AOC #4 INVESTIGATION, AUGUST 1, 2002**

A review of the analytical results for soil samples, R-1 through R-8 collected along the Northeast border of the park revealed the following:

### **Soil Samples R-1**

The results of the laboratory analysis performed on soil sample R-1 for PCB analysis revealed total PCBs, specifically Aroclor -1254 (1.5 mg/kg) was detected in excess of the most stringent NJDEP SCC of 0.49 mg/kg for total PCBs.

### **Soil Sample R-2 through R-8**

The results of the laboratory analysis performed on soil samples R-2 through R-8 for PCB analysis revealed all targeted analytes were below the most stringent NJDEP SCC.

The results of the laboratory analyses performed on the soil samples collected during this investigation are summarized on Table 4 and the complete laboratory analytical data is presented in Volume V.

## **7.3 REMEDIAL INVESTIGATION OF AOC #4, AUGUST 5, 2002**

As a result of the findings of the analytical results of soil samples R-1 through R-8, five delineation samples were subsequently collected on August 5, 2002, to delineate the PCB contamination discovered in soil sample R-1. Four horizontal delineation samples R-1A through R-1D were collected at a 15-foot radial distance from sample location R-1. Samples R-1A through R-1D were collected from 0 to 6 inch interval bsg. One vertical delineation sample R-1DEEP was collected at a depth of 1.0 to 1.5 feet bsg from the former soil sample location R-1. All soil samples were forwarded to a NJDEP certified laboratory for PCB analysis.

## **7.4 ANALYTICAL RESULTS OF AOC #4, AUGUST 5, 2002 REMEDIAL INVESTIGATION**

A review of the analytical results for soil samples, R-1A through R-1D and R-1DEEP collected to delineate the PCB contamination in soil sample R-1 revealed the following:

### **Soil Samples R-1A, R-1B and R-1DEEP**

The results of the laboratory analysis performed on soil samples R-1A, R-1B and R-1DEEP for PCB analysis revealed all targeted analytes were below the most stringent NJDEP SCC.

### **Soil Sample R-1C and R-1D**

The results of the laboratory analysis performed on soil sample R-1C and R-1D for PCB analysis revealed total PCBs, specifically Aroclor -1254 at concentrations of 2.7 mg/kg and 0.74 mg/kg, respectively, detected in excess of the most stringent NJDEP SCC of 0.49 mg/kg for total PCBs.

The results of the laboratory analyses performed on the soil samples collected during this investigation are summarized on Table 4 and the complete laboratory analytical data is presented in Volume V.

## **8.0 PARTIAL REMEDIAL ACTION OF AOC #4**

At the request of the Borough of South Plainfield, PMK and Aurora mobilized on Site on August 12 and 13, 2002 to excavate PCB contaminated soil identified in soil samples R-1C, R-1D and R-1.

Approximately forty (40) cubic yards of PCB contaminated soil was excavated. Subsequently, a total of 12 post excavation soil samples were collected and analyzed for PCBs. Post excavation soil samples R1-PE1 through R1-PE9 were collected from the excavation on the northern side of the fence at depths ranging from 0.5 to 3.0 feet bsg and post excavation soil samples SW-1-081302, SW-2-081302, and FLOOR081302 were collected from the excavations on the southern side of the fence at depths ranging from 1.5 to 2.5 feet bsg.

A review of the laboratory analytical results for the post excavation samples collected on August 12 and 13, 2002 indicated PCBs concentrations in ten of the twelve post excavation soil samples collected exceeded the NJDEP SCC. The soil remediation activities were further extended. On August 20, 2002, PMK and Aurora remobilized at the Site to further excavate PCB impacted soil. Based upon a review of the prior analytical laboratory results, the excavation to the north of the fence was extended vertically to depths ranging from 2.0 to 5.0 feet varying based on original surface grade and horizontally to the north and west. Approximately eighty (80) cubic yards of PCB contaminated soil was excavated. A total of nine (9) post excavation soil samples were collected from this excavation. Post excavations soil samples R1-PE10 through R1-PE18 were collected from depths ranging from 2.0 to 5.0 feet bsg.

The excavation to the south of the fence was extended vertically to a depth of 2.5 feet bsg and horizontal to the west and east. A total of four (4) post excavation soil samples were collected from this area. Post excavation soil samples SW-3, FLR-2, FLR3, and SW-4 were collected at depths ranging from 1.5 to 2.5 feet bsg. All soil samples were collected and analyzed for PCBs.

A review of the laboratory analytical results for the post excavation samples collected on August 20, 2002 indicated PCB concentrations were present in five (5) of the thirteen (13) soil samples that exceeded the NJDEP SCC. However the excavation floor samples revealed PCB concentrations below the NJDEP SCC at depths ranging from 2.0 to 5.0 feet bsg.

In August 2002, a case manager for the Site informed PMK that the USEPA investigated Veterans Memorial Park for potential PCB impacts as part their the floodplain soil and sediment investigation for the Cornel Dublier Site. The USEPA field investigation team collected 34 soil samples the Site and analyzed for PCBs. All soil samples were collected approximately zero to two inches bsg and PCB contamination was identified above the NJDEP SCC. Based on information provided by the NJDEP case manager for the Site, PMK decided to halt further soil remediation activities. A copy of the USEPA Floodplain Soil and Sediment Investigations is included as Appendix A.

All soil excavated during the PCBs remediation activities was stockpile on Site and staged on 6 mil plastic sheeting and covered with the same for future disposal of the soil.

#### **8.1 AOC #4 POST EXCAVATION ANALYTICAL RESULTS, AUGUST 12 AND 13, 2002**

A review of the analytical results for soil samples, collected as post excavation soil samples during the remedial action activities on August 12 and 13, 2002, revealed the following:

##### **Soil Sample Post Excavation South of Fence**

A review of PCBs laboratory analysis performed on soil sample SW-1-081302, SW-2-081302 and FLOOR081302 revealed elevated total PCBs, specifically Aroclor -1254 at concentrations of 3.3

mg/kg, 1.3 mg/kg and 4.8 mg/kg, respectively, detected in excess of the most stringent NJDEP SCC of 0.49 mg/kg for total PCBs.

#### Soil Sample North of Fence

The results of the laboratory analysis performed on soil sample R1-PE1, R1-PE4 through R1-PE9 for PCB analysis revealed total PCBs, specifically Aroclor -1254 at concentrations of 1.8, 1.5, 1.3, 3.1, 3.1 2.7 and 1.3 mg/kg, respectively, detected in excess of the most stringent NJDEP SCC of 0.49 mg/kg for total PCBs.

The results of the laboratory analysis performed on soil samples R1-PE2 and R1-PE3 revealed all targeted compounds were detected below the MDL or below the most stringent NJDEP SCC. The locations of post excavation soil samples: SW-1-081302, SW-2-081302, FLOOR081302, R1-PE4 through R1-PE9, were further remediated by excavation on August 20, 2002, therefore the analytical results should not be utilized for the evaluation of this AOC.

The results of the laboratory analyses performed on the soil samples collected during this investigation are summarized on Table 5 and the complete laboratory analytical data is presented in Volume V.

### **8.2 AOC #4 PCB POST EXCAVATION ANALYTICAL RESULTS, AUGUST 20, 2002**

A review of the analytical results for soil samples, collected as post excavation soil samples during the second remedial action activities revealed the following:

#### Soil Sample Excavation South of Fence

A review of PCB laboratory analysis performed on soil sample SW-3 revealed the presence of total PCBs, specifically Aroclor -1254 at concentrations of 1.5 mg/kg in excess of the most stringent NJDEP SCC of 0.49 mg/kg for total PCBs.

A review of PCB laboratory performed on soil samples FLR-1, FLR-2 and SW-4 revealed that all targeted compounds were detected below the MDL or below the most stringent NJDEP SCC.

#### Soil Sample North of Fence

A review of the PCB analysis of soil sample R1-PE11, R1-PE13, R1-PE14 and R1-PE17 revealed the presence of total PCBs, specifically Aroclor -1254 at concentrations of 6.1, 0.67, 2.4 and 1.4 mg/kg, respectively, in excess of the most stringent NJDEP SCC of 0.49 mg/kg for total PCBs.

A review of PCB laboratory analysis performed on soil samples R1-PE10, R1-PE12, R1-PE15, R1-PE16 and R1-PE18 revealed that all targeted compounds were detected either below the MDL or below the most stringent NJDEP SCC. Remedial actions that involved the excavation of the PCB contaminated soil identified in the area of soil sample R-1. Post excavation samples collected on August 20, 2002 revealed PCB contamination remained to the north and east of the excavation.

Based on information received from the NJDEP that the USEPA had previously identified PCB impacted soil, remedial actions were halted. The remaining and identified PCB impacted soil samples are depicted on Plate 5B. The results of the laboratory analyses performed on the soil

samples collected during this investigation are summarized on Table 5 and the complete laboratory analytical data is presented in Volume V.

## **9.0 SURVEY OF PROPERTY**

In August 2002, CME Associates of Old Bridge, New Jersey perform a Survey of Veterans Memorial Park. The survey encompassed site features, boundaries, wetland delineation performed by PMK and test pit locations. The survey identified the limits of the property, however property owners of some of the adjacent properties were not identified through deeds, however it is assumed the County of Middlesex is the current owner of lot 16. The site survey map has been utilized as the base map for Plates 4, 5 and 6.

## **10.0 BASELINE ECOLOGICAL EVALUATION**

A Baseline Ecological Evaluation (BEE) was performed for the Site in August 2002. The BEE findings indicate that areas of ecological concern exist on the property. Specifically, no stressed vegetation was observed, however, the findings of the former investigations indicate contamination is present within the wetland and close proximity to the wetlands on the western portion of the property. The complete BEE is presented as Appendix F. The BEE report recommends the delineation of the contamination in the areas of ecological concern.

## **11.0 SITE SOIL SAMPLING PROCEDURES**

All extracted materials were field screened using a Mini-Rae 2000 photoionization detector (PID), in accordance with the requirements of N.J.A.C. 7:26E-3.6. A detailed description of the encountered materials is provided in the Test Pit Logs, presented in Appendix E. The soils have been visually classified in accordance with the Unified Soil Classification System.

All soil samples were collected in accordance with the requirements of N.J.A.C. 7:26E-3.6 and the protocols outlined in the NJDEP *Field Sampling Procedures Manual* (May 1992). Soil samples to be analyzed for volatile organics (VO) were collected with bias to areas demonstrating staining or odor. In cases where no staining or odor were observed, VO samples were collected in accordance with N.J.A.C. 7:26E-3.6 (4)(i)(4) and the NJDEP *Methodology for the Field Extraction/Preservation of Soil Samples With Methanol for Volatile Organic Compounds* (February 1997). Sample depths were based upon the field screening results as well as our representative's visual observations.

All soil samples collected as a part of this site investigation were transported to ChemTech (NJ Lab. ID #12013), of Mountainside, New Jersey for analysis. Standard chain of custody procedures was implemented to track the samples. The soil-sampling program implemented at this Site is summarized on Table 1.

## **11.1 SAMPLING RESULTS**

The results of the laboratory analyses performed on the soil samples collected during this investigation are summarized on Tables 2 through 5, and on Plate 5. The quality control/quality assurance results are presented on tables 6. The complete laboratory analytical reports are included in Volume II through V.

In order to evaluate compliance with existing remedial standards for soils, PMK has utilized the Soil Cleanup Criteria (SCC) published in the NJDEP Site Remediation Newsletter, dated May 12, 1999. These standards have been adopted by NJDEP as guidelines for determining whether a remedial action is warranted at a Site. These criteria are also presented in the results summary, Tables 2 through 5.

## **12.0 CERTIFICATIONS**

The certifications required pursuant to the NJDEP Technical Requirements for Site Remediation (N.J.A.C. 7:26E) are presented in Appendix G.

## **13.0 SUMMARY OF FINDINGS AND RECOMMENDATIONS.**

Based upon the laboratory analytical results, visual observations and a review of other investigations performed at the Site, PMK noted the following:

### **13.1 FINDINGS OF TEST PIT INVESTIGATION AOC #1, AOC #4 AND AOC #8**

#### **AOC #1 Historic Fill Classifications**

The test pit investigation revealed the following:

1. Visual observations of the test pits revealed that historic fill is present throughout the Site.
2. Ten soil samples were collected from six of the test pits to investigate potential for contaminants.
3. The analytical results of the test pit investigation revealed the following:
  - An analytical result of soil sample TP-4 indicated concentrations of benzo(a)pyrene and PCBs in excess of the NJDEP SCC.
  - An analytical result of soil sample TP-6 indicated concentrations of PCBs and arsenic in excess of the NJDEP SCC.
  - An analytical result of soil sample TP-6d indicated concentrations of arsenic, beryllium, and lead in excess of the NJDEP SCC.
  - An analytical result for soil sample TP-10 indicated concentrations of PCBs in excess of the NJDEP SCC.
  - An analytical result for soil sample TP-13 indicated concentrations of beryllium in excess of the NJDEP SCC
  - An analytical result for soil sample TP-31 indicated concentrations of arsenic in excess of the NJDEP SCC.



#### AOC #5 Black "tar-like" Substance

The limits of the area of the Black "tar-like" substance have been successfully identified and delineated.

1. A review of GC fingerprint analytical result revealed that the black tar like substance contained phenolic-base compound. No specific compound was identified in the GC finger print analysis.
2. The black "tar-like" substance was sampled for asbestos. The results did not indicate the presence of asbestos.
3. The black "tar-like" substance has been identified in approximately 22,012 square feet of the field. PMK recommends the excavation, removal and proper disposal of the black tar like substance from the area identified on Plate 6.
4. The visual classification sample collected by the NJDEP Emergency Response Team was verbally communicated to PMK and concluded the black "tar-like" substance was a petroleum based compound.
5. The Middlesex County Health Department collected two (2) samples from the black "tar-like" substance for PP+40. The analytical results indicated all targeted compounds were detected below the NJDEP SCC.

#### AOC #8 Asbestos Containing Material

The limits of the asbestos containing material have been successfully identified and delineated.

1. The ACM has been identified in approximately 90,000 square feet of field.
2. The results of the three (3) of four (4) bulk material samples collected from the embankment area of the dry pond confirmed the presence of asbestos, ranging from 6.3% to 15%. The other sample did not indicate the presence of asbestos.
3. PMK collected additional bulk material samples from selected test pits, which contained the similar material to the tiles in the dry pond area. The confirmatory bulk samples indicated the result of the eight (8) of nine (9) samples collected from test pits TP-1, TP-2, TP-6, TP-23, TP-24, and TP-28 indicated the presence of asbestos ranging from 10% to 18%. The other sample was collected from the black "tar-like" substance observed in TP-6. The results of the sample did not indicate the presence of asbestos.
4. The Middlesex County Health Department collected two (2) bulk material samples from the exposed tile in the embankment of the dry pond area. The analytical results indicated the presence of asbestos in both samples ranging from 24% to 26 %.

PMK recommends the excavation, removal and proper disposal of the areas where large quantities of asbestos material have been identified.

**13.2 FINDINGS OF PCB INVESTIGATIONS, AOC #4**

The PCB investigations and limited remedial action revealed the following:

1. Based on the a review of the PCB analytical results from the USEPA investigation performed by Roy F. Weston, Inc., elevated PCB concentrations were identified in the park. The findings of the USEPA investigation performed at the Site indicated that thirteen of the thirty-four surface soil samples collected from the Park for PCB analysis revealed concentrations in excess of the most stringent NJDEP SCC.
2. The results of the PMK SI revealed PCB contamination exceeded the NJDEP SCC in one (R-1) of eight samples (R-1 through R-8) collected along the northeast boundary of the park.
3. Limited remedial activities were conducted in the area of soil sample, R-1. Approximately one hundred twenty (120) cubic yards of PCB contaminated soil was excavated, stockpiled on 6 mil plastic sheeting and covered with the same on Site.
4. Twenty-five (25) post excavation soil samples were collected. Six (6) post excavation samples exhibited PCB concentration in excess of the NJDEP SCC.
5. PMK has been informed by the USEPA that the remedial actions to be performed in this area of concern will be investigated under the USEPA OU-3 in conjunction with the Cornell Dublier Superfund Site. Therefore, PMK recommends an interim remedial action plan including encapsulation and isolation, to reduce the potential risk associated with the PCB contamination at the Site.

**14.0 PROPOSED INTERIM REMEDIAL ACTION WORKPLAN**

On September 27, 2002, representatives of PMK, the Borough of South Plainfield, USEPA, NJDEP, Edison Wetland Association and Middlesex County Health Department gathered to discuss the future soil investigation and remediation activities at the Site. At this meeting, USEPA case manager, Mr. Pete Mannino, informed all interested parties that the PCB soil contamination found in surface soil investigation performed in late 1999 remained an area of concern. At the present time the USEPA is planning to perform further remedial investigation and feasibility studies (RI/FS) as a part of their operational Unit 3 (OU 3). Mr. Mannino also informed all interested parties that due to the lack of funding and the USEPA process the RI/FS study for the Site could not be completed in the next few months. Based on the information provided by the USEPA case manager, the RI/FS for the Site would take at least two to three years.

At the meeting, Borough of South Plainfield officials informed both regulatory agencies that the Borough of South Plainfield would like to open Veterans Memorial Park next spring, and would like to exercise an interim soil remediation measure until the USEPA OU 3 studies are completed. In the meeting the interim remedial action work plan measures were discussed with the NJDEP and USEPA representatives. The following interim remedial measures were proposed:

1. Excavation, removal and disposal of the unknown black substance.

2. Excavation, removal and disposal of the exposed asbestos tiles in the embankment area.
3. Encapsulation and fencing of the PCB contaminated area.

Interim Remedial Action Measures listed above were verbally approved by both of the regulatory agencies. The limits of PCB, ACM and black substance areas are identified on Plate 6.

#### **14.1 ANTICIPATED PROJECT SCHEDULE**

The following project schedule is anticipated for the remedial action activities at the subject Site:

PROJECT TASK	TARGET COMPLETION DATE
Prepare Remedial Action Workplan (RAW) and submission to NJDEP	October 16, 2002
Prepare and submit Wetland permit and wetland mitigation plan to the NJDEP	October 20, 2002
Anticipated NJDEP review time	4 to 6 Weeks
Mobilize and perform excavation, soil sampling and backfill operations	6 weeks
Receipt of laboratory analytical results	4 weeks
Remedial Action Report Preparation/Client Review	3 weeks
Submission of RAR to the NJDEP	Approximately January 30, 2002

#### **14.2 PROJECT PERSONNEL**

In accordance with the requirements of the NJDEP Technical Requirements for Site Remediation (N.J.A.C. 7:26E), the following represent the project personnel that have been assigned or are associated with the project:

Name	Affiliation	Telephone No.	Project Task
Vincent. Buttiglieri	Bureau of South Plainfield, Business Administrator	(908) 348-4188	Facility Contact
Thomas O. Mineo, P.E.	PMK Group	(908) 497-8900 x113	Associate
Devang Patel	PMK Group	(908) 497-8900 x144	Project Manager
Jeffrey Villanova	PMK Group	(908) 497-8900 x187	Field Scientist
John Digregorio	Aurora Environmental	732-888-1188	Excavation Subcontractor
Omyra Pennas	Chemtech Laboratories	(908) 789-8900	Laboratory Subcontractor

#### **14.3 PROJECT BACKGROUND**

On behalf of the Borough of South Plainfield PMK proposes the following remedial actions based on the findings included in this SI, the limited remedial actions and information provided by the USEPA.

#### **14.4 PROPOSED REMEDIAL ACTIONS**

Based upon the results of additional SI investigations conducted by PMK, USEPA investigations at the Site and the September 27, 2002 meeting between the Borough of South Plainfield, the NJDEP case manager, USEPA, Middlesex County Health Department and Edison Wetland Association Representatives, PMK proposes the following interim remedial actions to address all pending issues identified at the Site. In order to facilitate the remedial actions proposed for the Site, PMK has broken the actions into four Phases.

##### **Phase I – Excavation of Black “tar-like” Substance**

PMK proposes excavation, transportation and disposal of the black “tar-like” substance. The impacted area to be excavated covers approximately 22,016 square feet (ft<sup>2</sup>) and will be excavated to a depth of 4.5 feet below surface ground (bsg). The total estimated volume to be excavated is 3,667 cubic yards. During the excavation, visual observations will be performed to make sure that all of the black “tar-like” substance is removed. Since the previous said sampling results were inconclusive, PMK proposes no post excavation sampling for this AOC. The area would be backfilled with certified clean fill. The area to be excavated is depicted on Plate 6.

##### **Phase II – Excavation of Asbestos Tiles**

PMK proposes the excavation of exposed asbestos tiles from the embankment of the dry pond area to approximately 25 feet from the embankment toward the Park in a north-northeast direction. The area would be backfilled with certified clean fill and the wetland vegetation would be restored as per the approved wetland mitigation plan. Once the NJDEP completes its investigation of the area PMK proposes to cover the area with a geotextile fabric and six to eight inches of certified clean fill to encapsulate this area. The area to be excavated is approximately 6,000 square feet (ft<sup>2</sup>) and will be excavated to an approximate depth of 4 to 6 feet bsg.

The approximated limits of the area to be excavated for asbestos and the areas to be isolated by installation of chain-link fence are depicted on Plate 6.

Upon completion of the USEPA OU3 investigations, PMK proposes encapsulation of the remaining visually and analytically identified ACM areas (for identification purposed we have labeled as Area A). PMK proposed encapsulation of Area A with covering geotextile fabric and placement of 6-8” of certified clean soil. Subsequently, PMK recommends filing a deed restriction on the property implementing institutional controls.

##### **Phase III – PCB contaminated areas**

Based on the findings of the soil samples collected by PMK and the USEPA, it has been determined that PCB contamination exists on the northwestern side of the Site. The PCB contamination has been identified by the USEPA and is potentially connected with the Cornell Dublier Superfund Site, which is located approximately one-half mile up gradient and upstream of the Site. The USEPA case manager for the Cornell Dublier Site informed all interested parties that the USEPA OU3 is planning to perform RI/ FS investigation. However, it may take up to three years because of a lack of funding. Therefore, PMK proposes interim remedial measures to isolate, encapsulate and limit risk from PCBs. The interim measures proposed for this AOC are:

- 1) The PCB contamination found in the ball field and grass area will be isolated by the construction of a six foot chain link fence and signs will be posted to minimize hazard. To ensure the fence is located properly to close off impacted areas, PMK proposes to collect surficial soil samples at a thirty (30) foot interval prior to erecting the fence. The soil samples would be collected from the zero to six inch interval along the proposed fence line. PMK is estimating that approximately nine to ten soil samples would be collected and analyzed for PCBs.
- 2) The PCB contamination found in the gravel parking lot will be encapsulated with 2-4" of asphalt to minimize hazard. The parking area will be connected to the park by widening the asphalt paved walking path. The Proposed Interim Remedial Actions and the approximate location of the soil samples are depicted on Plate 6.

#### Historic Fill Phase IV

Based on additional site investigation activities performed by PMK and available historic information, it is evident that historic fill is present throughout the site. PMK proposes filing a deed restriction on the property implementing institutional controls. No further soil sampling is recommended for this AOC.

#### **14.5 SOIL SAMPLING PROCEDURES**

The soil samples will be collected using decontaminated stainless steel spoons in accordance with the requirements of N.J.A.C. 7:26E and the standard sampling protocols detailed in the NJDEP *Field Sampling Procedures Manual* (May, 1992). The soil samples will be placed in laboratory prepared sample jars and capped with Teflon-lined lids. The soil samples will be transmitted to a NJDEP certified laboratory for analyses. Standard Chain of Custody procedures will be implemented to track the samples.

All fieldwork will be performed under the direct supervision of a subsurface evaluator from PMK. Our representative will identify the sample locations in the field, maintain a continuous log of the explorations as the work proceeds and supervise the soil sampling procedures to evaluate the subsurface conditions.

The proposed soil sampling locations are depicted on Plate 6.

#### **14.5 QUALITY ASSURANCE/ QUALITY CONTROL PLAN (QA/QC)**

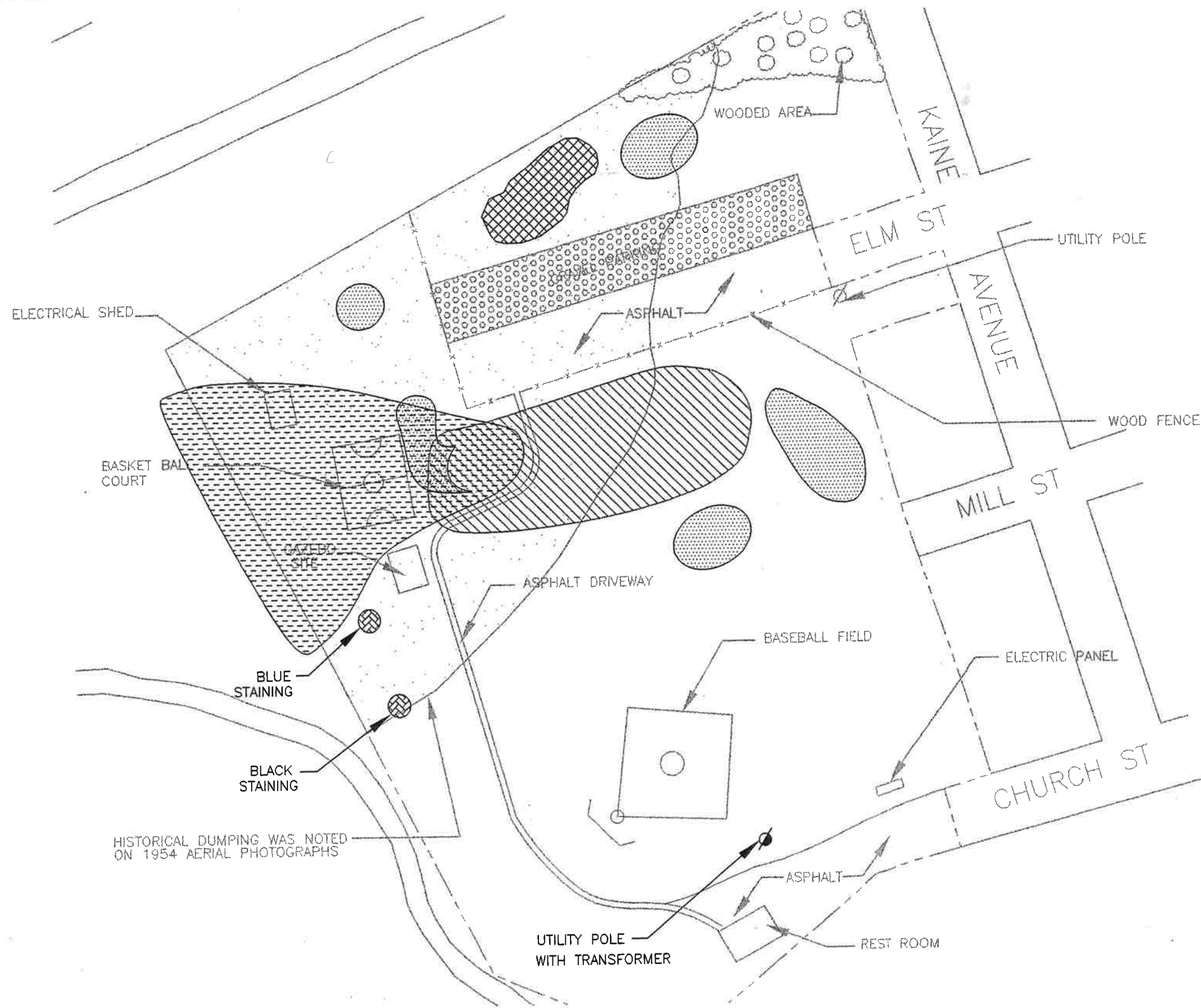
In order to assure the validity of the sampling results, all sampling activities to be performed at the subject site will be performed in accordance with the PMK Group standard Quality Assurance Plan, Appendix H.

#### **14.6 HEALTH AND SAFETY PLAN**

All Remedial Action operations to be performed at the subject site will be performed in accordance with the site-specific Health and Safety Plan (HASP), which will be updated and developed in accordance with the Occupational Safety and Health Administration (OSHA) regulations (29 CFR 1910.120). A Site-specific HASP was previously prepared and will be updated based on the recent findings and the proposed remedial actions.

#### **14.7 INTERIM REMEDIAL ACTION REPORT**

Upon completion of all remedial actions and receipt and review of the laboratory analytical results reports of the soil samples, a Remedial Action Report (RAR) will be prepared in accordance with N.J.A.C. 7:26E. The RAR will include a description of site activities, a summary and discussion of the sample results, site location and sample location maps, the laboratory analytical reports and findings with remedial actions documented.



## LEGEND

- AOC#1** - HISTORIC FILL OR ANY OTHER FILL MATERIAL (NOT DEPICTED)
- AOC#2** - ELECTRICAL TRANSFORMER
- AOC#3** - AREAS OF STRESSED VEGETATION (N.T.S)
- AOC#4** - AREAS WHICH RECEIVE FLOOD OR STORM WATER FROM POTENTIALLY CONTAMINATED AREAS (ENTIRE SITE)
- AOC#5** - BLACK "TAR LIKE" SUBSTANCE EMANATING FROM THE GROUND. (N.T.S)
- AOC#6** - SINK HOLES AREAS
- AOC#7** - DISCOLORED OR SPILL AREAS
- AOC#8** - ASBESTOS CONTAINING MATERIAL
- ESTIMATED STUDY AREA AND PROPERTY BOUNDARY

SOURCE:  
THE ORIGINAL DRAWING IS BASED ON TAX MAP  
OF SOUTH PLAINFIELD SCALE 1" = 100'

NOTE:  
THE LOCATIONS OF INDICATED SITE FEATURES  
ARE APPROXIMATE AND ARE BASED UPON  
FIELD OBSERVATIONS AND MEASUREMENTS



SCALE: 1"=100'

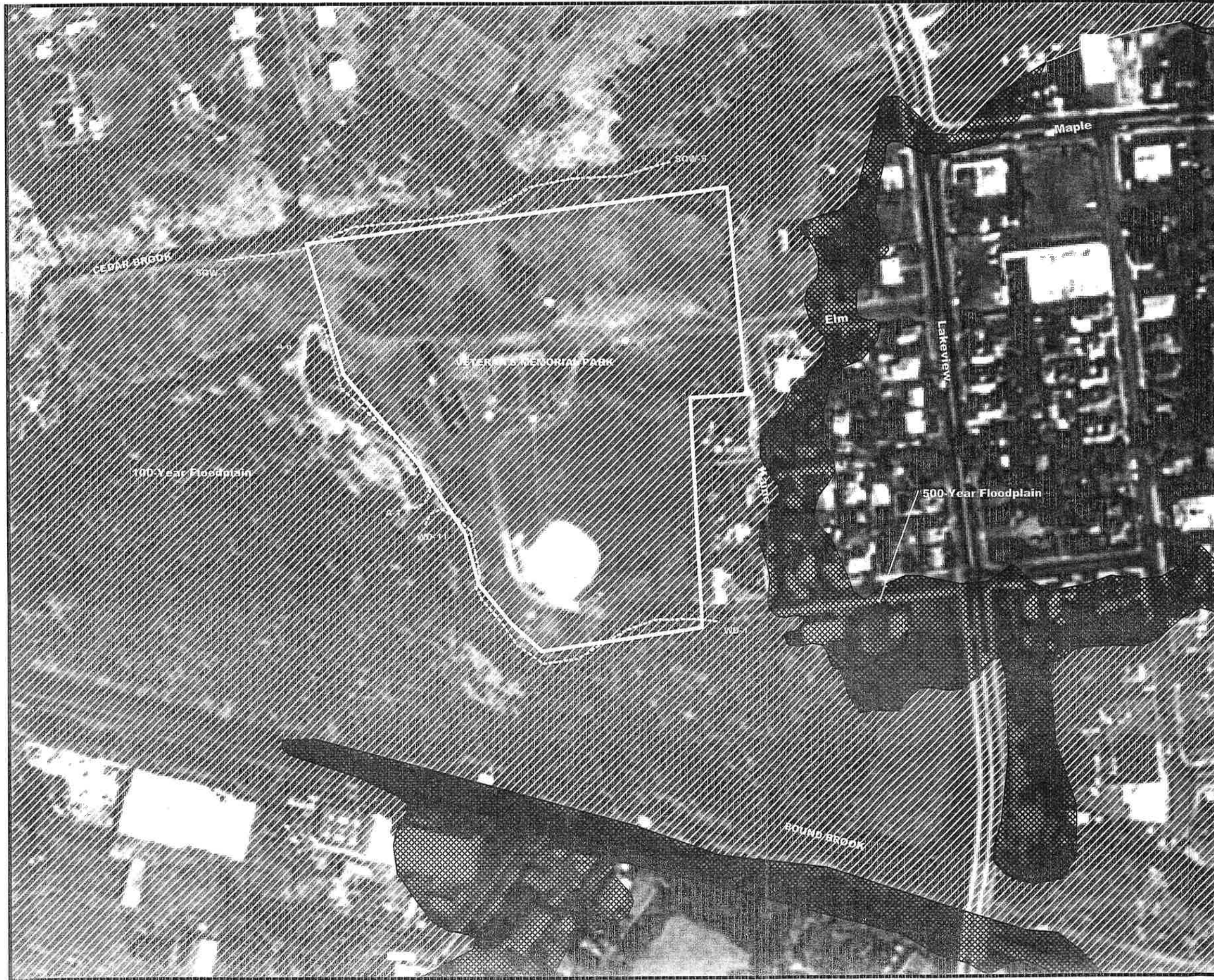
VETERANS MEMORIAL PARK  
CHURCH STREET & KAINE AVENUE  
SOUTH PLAINFIELD, NEW JERSEY

## SITE PLAN WITH AREAS OF CONCERN

DRAWN BY	TS	DATE	3-14-02
CHECKED BY	JV	SCALE	1"=100'
PROJECT NO.	0502014	PLATE NO.	2
PROFESSIONAL ENGINEER		LIC. NO.	
		DATE:	

**PMK Group**  
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


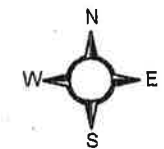


**PLATE 3**  
**FLOODPLAIN LOCATION MAP**

Veteran's Memorial Park  
Borough of South Plainfield  
Middlesex County, New Jersey

**LEGEND:**

- 100 Year Floodplain
-  500 Year Floodplain
-  Approx. Limit of Wetlands



100 0 100 200 Feet



**Notes:**

1. This map was created using NJDEP 1995 Color Infrared Digital Imagery and FEMA Q3 Flood Data, in conjunction with PMK Group's work.
2. The FEMA Q3 Flood Data are intended for planning purposes only and are not intended to replace the hardcopy Flood Insurance Rate Maps (FIRM).
3. Due to the scale at which they were created, the Q3 Flood Data can not be assumed to have an accuracy of better than 40 feet.



Created By: J.W. Date: 10-08-02 Project No.: 0302037



**TABLE 1**  
**SITE SAMPLING SUMMARY**  
**VETERANS MEMORIAL PARK**  
**SOUTH PLAINFIELD, NEW JERSEY**  
**PMK #0502014**

LOCATION	SAMPLE ID#	LAB ID#	SAMPLE DATE	MATRIX	DEPTH (ft) (below grade)	ANALYTICAL PARAMETERS
BLACK SUBSTANCE	GC-2	P3425-01	7/23/02	Solid	0.0-0.5	GC/MS
SEDIMENT SAMPLES	SS-1	P3457-01	7/24/02	Sediment	0.0-0.5	PP + 40
	SS-2	P3457-02	7/24/02	Sediment	0.0-0.5	
PCB INVESTIGATION	R-1	P3560-01	8/1/02	Soil	0.0- 0.5	PCBs
	R-2	P3560-02	8/1/02	Soil	0.0- 0.5	
	R-3	P3560-03	8/1/02	Soil	0.0- 0.5	
	R-4	P3560-04	8/1/02	Soil	0.0- 0.5	
	R-5	P3560-05	8/1/02	Soil	0.0- 0.5	
	R-6	P3560-06	8/1/02	Soil	0.0- 0.5	
	R-7	P3560-07	8/1/02	Soil	0.0- 0.5	
	R-8	P3560-08	8/1/02	Soil	0.0- 0.5	
	R-1A	P3612-01	8/5/02	Soil	0.0- 0.5	
	R-1B	P3612-02	8/5/02	Soil	0.0- 0.5	
	R-1C	P3612-03	8/5/02	Soil	0.0- 0.5	
	R-1D	P3612-04	8/5/02	Soil	0.0- 0.5	
	R-1DEEP	P3612-05	8/5/02	Soil	1.0-1.5	
TEST PIT INVESTIGATION	TP-31	P3702-01	8/9/02	SOIL	1.0-1.5	PP + 40
	TP-33	P3702-02	8/9/02	SOIL	1.0-1.5	
	TP-34	P3702-03	8/9/02	SOIL	1.0-1.5	
	TP-6d	P3702-04	8/9/02	SOIL	6.5-7.0	
	TP-6	P3702-05	8/9/02	SOIL	2.5-3.0	
	TP-4	P3702-06	8/9/02	SOIL	3.5-4.0	
	TP-4d	P3702-07	8/9/02	SOIL	7.0-7.5	
	TP-13	P3702-08	8/9/02	SOIL	1.5-2.0	
	TP-10	P3702-09	8/9/02	SOIL	2.0-2.5	
	TP-10d	P3702-10	8/9/02	SOIL	3.5-4.0	

**TABLE 1 continued**  
**SITE SAMPLING SUMMARY**  
**VETERANS MEMORIAL PARK**  
**SOUTH PLAINFIELD, NEW JERSEY**  
**PMK #0502014**

LOCATION	SAMPLE ID#	LAB ID#	SAMPLE DATE	MATRIX	DEPTH (ft) (below grade)	ANALYTICAL PARAMETERS
PCB POST EXCAVATION SAMPLES	R1-PE1	P3708-01	8/12/02	Soil	0.5-1.0	PCBs
	R1-PE2	P3708-02	8/12/02	Soil	1.5-2.0	
	R1-PE3	P3708-03	8/12/02	Soil	3.0-3.5	
	R1-PE4	P3708-04	8/12/02	Soil	1.5-2.0	
	R1-PE5	P3708-05	8/12/02	Soil	0.5-1.0	
	R1-PE6	P3708-06	8/12/02	Soil	0.5-1.0	
	R1-PE7	P3708-07	8/12/02	Soil	0.5-1.0	
	R1-PE8	P3708-08	8/12/02	Soil	0.5-1.0	
	R1-PE9	P3708-09	8/12/02	Soil	1.5-2.0	
PCB POST EXCAVATION SAMPLES	SW-1-081302	P3720-01	8/13/02	Soil	1.5-2.0	PCBs
	SW-2-081302	P3720-02	8/13/02	Soil	1.5-2.0	
	FLOOR081302	P3720-03	8/13/02	Soil	2.0-2.5	
PCB POST EXCAVATION SAMPLES	R1-PE10	P3832-01	8/20/02	Soil	4.5-5.0	PCBs
	R1-PE11	P3832-02	8/20/02	Soil	2.0-2.5	
	R1-PE12	P3832-03	8/20/02	Soil	2.0-2.5	
	R1-PE13	P3832-04	8/20/02	Soil	2.0-2.5	
	R1-PE14	P3832-05	8/20/02	Soil	2.0-2.5	
	R1-PE15	P3832-06	8/20/02	Soil	2.5-3.0	
	R1-PE16	P3832-07	8/20/02	Soil	3.5-4.0	
	R1-PE17	P3832-08	8/20/02	Soil	2.0-2.5	
	R1-PE18	P3832-09	8/20/02	Soil	3.0-3.5	
	SW-3	P3832-10	8/20/02	Soil	1.5-2.0	
	FLR-1	P3832-11	8/20/02	Soil	2.0-2.5	
	FLR-2	P3832-12	8/20/02	Soil	2.0-2.5	
	SW-4	P3832-13	8/20/02	Soil	1.5-2.0	
QUALITY CONTROL/ QUALITY ASSURANCE	TB	P3457-03	7/24/02	AQUEOUS	NA	VO+10
	TB0809	P3702-11	8/9/02	AQUEOUS	NA	
	FB080102	P3560-09	8/1/02	AQUEOUS	NA	PCBs

**TABLE 2**  
**SEDIMENT SAMPLING ANALYTICAL RESULTS (7/24/02)**  
**DRY POND AREA**  
**VETERANS MEMORIAL PARK**  
**SOUTH PLAINFIELD, NEW JERSEY**  
**PMK# 0502014**

Sample ID	New Jersey Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Non-residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Impact Ground Water Soil Cleanup Criteria (mg/kg)	SS-1 P3457-01 7/24/02 0- 0.5 Sediment (mg/kg)	SS-2 P3457-02 7/24/02 0- 0.5 Sediment (mg/kg)
Lab Sample Number					
Sampling Date					
Sampling Depth (feet)					
Matrix					
Units					
<b>VOLATILE COMPOUNDS (GC/MS)</b>					
	<b>DILUTION FACTOR</b>			<b>1.0</b>	<b>1.0</b>
Chloromethane	520	1	10	ND	ND
Benzene	3	13	1	ND	ND
Toluene	1,000	1000	500	ND	ND
Tetrachloroethene	4	6	1	ND	ND
Chlorobenzene	37	680	1	ND	ND
Ethylbenzene	1,000	1000	100	ND	ND
Xylene(Total)	410	1000	67	ND	ND
Bromoform	86	370	1	ND	ND
Acrolein	NS	NS	NS	ND	ND
Total Confident Conc. VOAs (s)	1,000	1,000	1,000	0	0
Total Estimated Conc. VOA TICs (s)	1,000	1,000	1,000	0	0
<b>PESTICIDES</b>					
	<b>DILUTION FACTOR</b>			<b>1.00</b>	<b>1.00</b>
Total Pesticides	NS	NS	NS	ND	ND
<b>METALS</b>					
	<b>DILUTION FACTOR</b>			<b>NA</b>	<b>NA</b>
Antimony	14	340	NS	6.1 B	1.9 B
Arsenic	20	20	NS	5.8	12.8
Beryllium	2	2	NS	0.99 B	0.98
Cadmium	39	100	NS	35.1	7.80
Chromium	NS	NS	NS	75.1	31.90
Copper	600	600	NS	151	62.20
Lead	400	600	NS	246 *	81.40
Mercury	14	270	NS	0.45 *N	0.25 *N
Nickel	250	2,400	NS	55.6 E	35.9 E
Selenium	63	3,100	NS	3.1	0.97
Silver	110	4,100	NS	5.8	3.2
Thallium	2	2	NS	ND	ND
Zinc	1,500	1,500	NS	508	481.0

TABLE 2 continued  
SEDIMENT SAMPLING ANALYTICAL RESULTS SUMMARY (7/24/02)  
DRY POND AREA  
VETERANS MEMORIAL PARK  
SOUTH PLAINFIELD, NEW JERSEY  
PMK# 0502014

Sample ID	New Jersey Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Non-residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Impact Ground Water Soil Cleanup Criteria (mg/kg)	SS-1 P3457-01 7/24/02 0- 0.5 Sediment (mg/kg)	SS-2 P3457-02 7/24/02 0- 0.5 Sediment (mg/kg)
Lab Sample Number					
Sampling Date					
Sampling Depth (feet)					
Matrix					
Units					
<b>SEMIVOLATILE COMPOUNDS (GC/MS)</b>					
	<b>DILUTION FACTOR</b>			<b>1.00</b>	<b>1.00</b>
Acenaphthylene	NS	NS	NS	ND	0.120 J
Acenaphthene	3400	10000	100	0.150 J	0.066 J
Fluorene	2300	10000	100	ND	0.093 J
Phenanthrene	NS	NS	NS	0.490 J	1.1
Anthracene	10000	10000	100	0.140 J	0.280 J
Di-n-butylphthalate	5700	10000	100	0.310 J	0.053 J
Fluoranthene	2300	10000	100	1.4	2.3
Benzidine	NS	NS	NS	ND	ND
Pyrene	1700	10000	100	1.4	2.5
Butylbenzylphthalate	1100	10000	100	3.3	0.44
3,3'-Dichlorobenzidine	2	6	100	ND	ND
Benzo(a)anthracene	0.9	4	500	0.8	1.5
Chrysene	9	40	500	1	1.7
bis(2-Ethylhexyl)phthalate	49	210	100	12 E	1.7
Di-n-octylphthalate	1100	10000	100	0.30 J	0.067 J
Benzo(b)fluoranthene	0.9	4	50	1.2	1.5
Benzo(k)fluoranthene	0.9	4	500	0.93	1.7
Benzo(a)pyrene	0.66	0.66	100	1	1.8
Indeno(1,2,3-cd)pyrene	0.9	4	500	0.520 J	0.39
Dibenz(a,h)anthracene	0.66	0.66	100	ND	0.120 J
Benzo(g,h,i)perylene	NS	NS	NS	0.600 J	0.77
Total Confident Conc. BNAs (s)	10,000	10,000	10,000	13.54	18.24
Total Estimated Conc. BNA TICs (s)	10,000	10,000	10,000	31.41	18.79
<b>PCBs</b>					
	<b>DILUTION FACTOR</b>			<b>100.00</b>	<b>100.00</b>
Aroclor-1254	0.49	2	50	7.3	6.7

**TABLE 3**  
**SOIL SAMPLING ANALYTICAL SUMMARY**  
**(HISTORIC FILL AND PCBs INVESTIGATION)**  
**VETERANS MEMORIAL PARK**  
**SOUTH PLAINFIELD, NEW JERSEY**  
**PMK# 0502014**

Sample ID	New Jersey Residential	New Jersey Non-Residential	New Jersey Impact to Ground Water	TP-31	TP-33	TP-34	TP-6d	TP-6	TP-4	TP-4d	TP-13	TP-10	TP-10d
Lab Sample Number	3	13	1	P3702-01	P3702-02	P3702-03	P3702-04	P3702-05	P3702-06	P3702-07	P3702-08	P3702-09	P3702-10
Sampling Date	8/9/02	8/9/02	8/9/02	8/9/02	8/9/02	8/9/02	8/9/02	8/9/02	8/9/02	8/9/02	8/9/02	8/9/02	8/9/02
Sampling Depth (feet)	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5	1.0-1.5
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Units	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
<b>VOLATILE COMPOUNDS (GC/MS)</b>													
<b>DILUTION FACTOR</b>													
Benzene	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Toluene	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Ethylbenzene	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Xylene(Total)	410	1,000	67	2.2 J	0.640 J	ND	ND	ND	ND	ND	ND	ND	ND
Total Confident Conc. VOAs (s)	1,000	1,000	1,000	0	0	ND	ND	ND	ND	ND	ND	ND	ND
Total Estimated Conc. VOA TICs (s)	1,000	1,000	1,000	13	1.3	ND	ND	ND	ND	ND	ND	ND	ND
<b>PESTICIDES</b>													
<b>DILUTION FACTOR</b>													
Pesticides	NS	NS	NS	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<b>METALS</b>													
<b>DILUTION FACTOR</b>													
Antimony	14	340	NS	7.20	ND	ND	5.6 B	2.0 B	3.7 B	0.89 B	0.43 B	0.30 B	NA
Arsenic	20	20	NS	37.9	7.9	7.0	46.7	41.4	16.6	2.6	9.5	0.64 B	ND
Beryllium	2	2	NS	0.57 E	0.58 E	0.58 E	2.4 E	0.65 E	0.66 E	0.26 BE	3.3 E	0.78 E	0.38 B.E
Cadmium	39	100	NS	0.74	0.54 B	0.50 B	0.48 B	0.95	20.2	0.20 B	ND	ND	ND
Chromium	600	600	NS	11.8	10.7	11.4	17.8	13	81.5	7.4	9.4	2.1	1.2 B
Copper	400	270	NS	74.1	47.6	47.5	64.9	48.4	87.7	2.6 B	1.7	ND	ND
Lead	14	600	NS	197	75.5	67.5	556	125	245	2.8	5.1	0.86	0.37 B
Mercury	250	2,400	NS	0.1	0.05	0.12	0.14	0.09	0.14	ND	ND	0.52	0.07
Nickel	63	3,100	NS	10	7.30	6.60	10.3	10.1	28.4	2.9 B	ND	ND	ND
Selenium	110	4,100	NS	2.6	0.85	1.00	1.6	0.58 B	2.1	0.47 B	0.68	ND	ND
Silver	1,500	1,500	NS	1.5	1.0	0.88 B	0.79 B	0.68 B	5.9	ND	ND	ND	ND
Zinc	1,500	1,500	NS	52.5	100.0	97.7	90.6	187	203	18.2	7.1	ND	ND

**TABLE 3 continued**  
**SOIL SAMPLING ANALYTICAL RESULTS SUMMARY**  
**VETERANS MEMORIAL PARK**  
**SOUTH PLAINFIELD, NEW JERSEY**  
**PMK# 0502014**

Sample ID Lab Sample Number Sampling Date Sampling Depth (feet) Matrix Units	New Jersey Residential Direct Contact Criteria (mg/kg)	New Jersey Non-Residential Direct Contact Criteria (mg/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (mg/kg)	TP-31 P3702-01 8/9/02 1.0-1.5 SOIL (mg/kg)	TP-33 P3702-02 8/9/02 1.0-1.5 SOIL (mg/kg)	TP-34 P3702-03 8/9/02 1.0-1.5 SOIL (mg/kg)	TP-6d P3702-04 8/9/02 6.5-7.0 SOIL (mg/kg)	TP-6 P3702-05 8/9/02 2.5-3.0 SOIL (mg/kg)	TP-4 P3702-06 8/9/02 3.5-4.0 SOIL (mg/kg)	TP-4d P3702-07 8/9/02 7.0-7.5 SOIL (mg/kg)	TP-13 P3702-08 8/9/02 1.5-2.0 SOIL (mg/kg)	TP-10 P3702-09 8/9/02 2.0-2.5 SOIL (mg/kg)	TP-10d P3702-10 8/9/02 3.5-4.0 SOIL (mg/kg)
<b>SEMIVOLATILE COMPOUNDS (GC/MS)</b>													
<b>DILUTION FACTOR</b>				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Naphthalene	230	4200	100	0.54	1.10 J	ND	ND	ND	ND	ND	ND	0.067 J	ND
Acenaphthylene	NA	NA	NA	0.110 J	ND	ND	ND	ND	0.120 J	ND	ND	0.120 J	ND
Acenaphthene	3400	10000	100	ND	ND	ND	ND	0.056 J	ND	ND	ND	ND	ND
Fluorene	2300	10000	100	ND	ND	ND	ND	0.072 J	ND	ND	ND	ND	ND
Phenanthrene	NS	NS	NS	0.76	0.150 J	0.048 J	0.150 J	0.7	0.360 J	ND	ND	0.34 J	ND
Anthracene	10000	10000	100	0.140 J	ND	ND	ND	0.150 J	0.130 J	ND	ND	0.076 J	ND
Di-n-butylphthalate	5700	10000	100	1.2	0.100 J	0.110 J	0.290 J	1.1	0.97	ND	ND	0.90 J	ND
Fluoranthene	2300	10000	100	1.2	0.120 J	0.140 J	0.350 J	1.4	1.2	ND	ND	1.1	ND
Pyrene	1700	10000	100	ND	ND	ND	ND	ND	0.9	ND	ND	ND	ND
Butylbenzylphthalate	1100	10000	100	0.57	0.044 J	0.069 J	0.140 J	0.54	0.44	ND	ND	0.410 J	ND
Benzof(a)anthracene	0.9	4	500	0.9	0.096 J	0.071 J	0.190 J	0.62	0.7	ND	ND	0.58	ND
Chrysene	9	40	500	0.86 JB	0.140 JB	0.190 JB	0.082 JB	0.210 JB	5.2 EB	ND	0.068 JB	ND	0.088 JB
bis(2-Ethylhexyl)phthalate	49	210	100	0.57	0.047 J	0.061 J	0.140 J	0.330 J	0.58	ND	ND	0.46	ND
Benzo(b)fluoranthene	0.9	4	50	0.55	ND	0.10 J	0.140 J	0.67	0.9	ND	ND	0.66	ND
Benzo(k)fluoranthene	0.9	4	500	0.41	ND	0.075 J	0.210 J	0.66	0.7	ND	ND	0.53	ND
Benzo(a)pyrene	0.66	0.66	100	0.41	ND	0.075 J	0.210 J	0.66	0.7	ND	ND	0.074 J	ND
Indeno(1,2,3-cd)pyrene	0.9	4	500	0.140 J	ND	ND	0.098 J	0.200 J	0.120 J	ND	ND	0.150 J	ND
Benzo(g,h,i)perylene	NS	NS	NS	ND	ND	ND	0.098 J	0.200 J	0.24 J	ND	ND	0.150 J	ND
Total Confident Conc. BNAs (s)	10,000	10,000	10,000	6.7	0.00	0	4.53	6.39	ND	ND	0	0	0
Total Estimated Conc. BNA TICs (s)	10,000	10,000	10,000	7.82	5.74	8.55	9.05	8.22	6.22	8.7	4.9	8.95	10
<b>PCBs</b>													
<b>DILUTION FACTOR</b>				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Aroclor-1254	0.49	2	50	ND	ND	0.11	0.43	2.4 E	2.6 E	ND	0.043	0.560 E	ND

**TABLE 4**  
**SOIL SAMPLING ANALYTICAL RESULTS SUMMARY**  
**PCB INVESTIGATION**  
**VETERANS MEMORIAL PARK**  
**SOUTH PLAINFIELD, NEW JERSEY**  
**PMK# 0502014**

Sample ID	New Jersey Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (mg/kg)	R-1 P3560-01 8/1/02 0.0-0.5 SOIL 10.0 (mg/kg)	R-2 P3560-02 8/1/02 0.0-0.5 SOIL 1.0 (mg/kg)	R-3 P3560-03 8/1/02 0.0-0.5 SOIL 1.0 (mg/kg)	R-4 P3560-04 8/1/02 0.0-0.5 SOIL 1.0 (mg/kg)	R-5 P3560-05 8/1/02 0.0-0.5 SOIL 10.0 (mg/kg)	R-6 P3560-06 8/1/02 0.0-0.5 SOIL 1.0 (mg/kg)	R-7 P3560-07 8/1/02 0.0-0.5 SOIL 1.0 (mg/kg)	R-8 P3560-08 8/1/02 0.0-0.5 SOIL 1.0 (mg/kg)
Lab Sample Number											
Sampling Date											
Sampling Depth (feet)											
Matrix											
Dilution Factor											
Units											
<b>PCBs</b>											
Aroclor-1016	0.49	2	50	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1221	0.49	2	50	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1232	0.49	2	50	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1242	0.49	2	50	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1248	0.49	2	50	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1254	0.49	2	50	1.5	0.15	0.042	0.056	0.47	0.047	0.04	0.28
Aroclor-1260	0.49	2	50	ND	ND	ND	ND	ND	ND	ND	ND

**TABLE 4 continued**  
**SOIL SAMPLING ANALYTICAL RESULTS SUMMARY**  
**(PCB INVESTIGATION)**  
**VETERANS MEMORIAL PARK**  
**SOUTH PLAINFIELD, NEW JERSEY**  
**PMK# 0502014**

Sample ID	New Jersey Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (mg/kg)	R-1A P3612-01 8/5/02 0.0-0.5 SOIL 1.0 (mg/kg)	R-1B P3612-02 8/5/02 0.0-0.5 SOIL 10.0 (mg/kg)	R-1C P3612-03 8/5/02 0.0-0.5 SOIL 10.0 (mg/kg)	R-1D P3612-04 8/5/02 0.0-0.5 SOIL 10.0 (mg/kg)	R-1DEEP P3612-05 8/5/02 1.0-1.5 SOIL 1.0 (mg/kg)
Lab Sample Number								
Sampling Date								
Sampling Depth (feet)								
Matrix								
Dilution Factor								
Units								
<b>PCBs</b>								
Aroclor-1016	0.49	2	50	ND	ND	ND	ND	ND
Aroclor-1221	0.49	2	50	ND	ND	ND	ND	ND
Aroclor-1232	0.49	2	50	ND	ND	ND	ND	ND
Aroclor-1242	0.49	2	50	ND	ND	ND	ND	ND
Aroclor-1248	0.49	2	50	ND	ND	ND	ND	ND
Aroclor-1254	0.49	2	50	0.4	0.48	2.7	0.74	ND
Aroclor-1260	0.49	2	50	ND	ND	ND	ND	ND



**TABLE 5**  
**SAMPLING SUMMARY RESULTS SUMMARY**  
**(PCB POST EXCAVATION)**  
**VETERANS MEMORIAL PARK**  
**SOUTH PLAINFIELD, NEW JERSEY**  
**PMK# 0502014**

Sample ID	New Jersey Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (mg/kg)	R1-PE1 P3708-01 8/12/02 0.5-1 SOIL 1.0	R1-PE2 P3708-02 8/12/02 1.5-2 SOIL 1.0	R1-PE3 P3708-03 8/12/02 3-3.5 SOIL 1.0	R1-PE4 P3708-04 8/12/02 1.5-2 SOIL 1.0	R1-PE5 P3708-05 8/12/02 0.5-1 SOIL 1.0	R1-PE6 P3708-06 8/12/02 0.5-1 SOIL 1.0	R1-PE7 P3708-07 8/12/02 0.5-1 SOIL 1.0	R1-PE8 P3708-08 8/12/02 0.5-1 SOIL 1.0	R1-PE9 P3708-09 8/12/02 1.5-2 SOIL 1.0
Lab Sample Number				(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Sampling Date												
Sampling Depth (feet)												
Matrix												
Dilution Factor												
Units												
<b>PCBs</b>												
Aroclor-1016	0.49	2	50	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1221	0.49	2	50	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1232	0.49	2	50	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1242	0.49	2	50	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1248	0.49	2	50	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1254	0.49	2	50	1.8	0.18	0.091	1.5 EP	1.3 E	3.1 E	3.1 EP	2.7 E	1.3 E
Aroclor-1260	0.49	2	50	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 5 continued  
SOIL SAMPLING ANALYTICAL RESULTS SUMMARY  
(PCB POST EXCAVATION)  
VETERANS MEMORIAL PARK  
SOUTH PLAINFIELD, NEW JERSEY  
PMK# 0502014

Sample ID Lab Sample Number Sampling Date Sampling Depth (feet) Matrix Dilution Factor Units	New Jersey Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (mg/kg)	SW-1-081302 P3720-01 8/13/02 1.5-2 SOIL 1.0 (mg/kg)	SW-2-081302 P3720-02 8/13/02 1.5-2 SOIL 1.0 (mg/kg)	FLOOR081302 P3720-03 8/13/02 2-2.5 SOIL 1.0 (mg/kg)
PCBs						
Aroclor-1016	0.49	2	50	ND	ND	ND
Aroclor-1221	0.49	2	50	ND	ND	ND
Aroclor-1232	0.49	2	50	ND	ND	ND
Aroclor-1242	0.49	2	50	ND	ND	ND
Aroclor-1248	0.49	2	50	ND	ND	ND
Aroclor-1254	0.49	2	50	3.3 E	1.3 E	4.8 E
Aroclor-1260	0.49	2	50	ND	ND	ND

TABLE 5 continued  
SOIL SAMPLING SUMMARY RESULTS SUMMARY  
PCB POST EXCAVATION  
VETERANS MEMORIAL PARK  
SOUTH PLAINFIELD, NEW JERSEY  
PMK# 0502014

Sample ID	New Jersey Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (mg/kg)	R1-PE10	R1-PE11	R1-PE12	R1-PE13	R1-PE14	R1-PE15	R1-PE16	R1-PE17	R1-PE18
Lab Sample Number				P3832-01	P3832-02	P3832-03	P3832-04	P3832-05	P3832-06	P3832-07	P3832-08	P3832-09
Sampling Date				8/20/02	8/20/02	8/20/02	8/20/02	8/20/02	8/20/02	8/20/02	8/20/02	8/20/02
Sampling Depth (feet)				4.5-5.0	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5	3.5-4.0	2.0-2.5	3.0-3.5
Matrix				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor				1.0	1.0	1.0	1.0	1.0	1.0	1	1.0	1.0
Units	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
<b>PCBs</b>												
Aroclor-1016	0.49	2	50	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1221	0.49	2	50	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1232	0.49	2	50	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1242	0.49	2	50	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1248	0.49	2	50	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1254	0.49	2	50	ND	6.1 E	ND	0.67 E	2.4 E	ND	ND	1.4 E	ND
Aroclor-1260	0.49	2	50	ND	ND	ND	ND	ND	ND	ND	ND	ND
<b>Sample ID</b>												
Lab Sample Number				SW-3	FLR-1	FLR-2	SW-4					
Sampling Date				P3832-10	P3832-11	P3832-12	P3832-13					
Sampling Depth (feet)				8/20/02	8/20/02	8/20/02	8/20/02					
Matrix				SOIL	SOIL	SOIL	SOIL					
Dilution Factor				1.0	1.0	1.0	1.0					
Units	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)					
<b>PCBs</b>												
Aroclor-1016	0.49	2	50	ND	ND	ND	ND					
Aroclor-1221	0.49	2	50	ND	ND	ND	ND					
Aroclor-1232	0.49	2	50	ND	ND	ND	ND					
Aroclor-1242	0.49	2	50	ND	ND	ND	ND					
Aroclor-1248	0.49	2	50	ND	ND	ND	ND					
Aroclor-1254	0.49	2	50	ND	ND	0.27	ND					
Aroclor-1260	0.49	2	50	ND	ND	0.12 P	ND					

**TABLE 6**  
**QUALITY CONTROL/ QUALITY ASSURANCE ANALYTICAL SUMMARY**  
**VETERANS MEMORIAL PARK**  
**SOUTH PLAINFIELD, NEW JERSEY**  
**PMK# 0502014**

Sample ID	New Jersey Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (mg/kg)	New Jersey Impact to Ground Water Soil Cleanup Criteria (mg/kg)	TB P3457-03 7/24/2002 Aqueous (mg/kg)	FB080102 P3560-09 8/1/2002 Aqueous (mg/kg)	TB080902 P3702-11 8/9/2002 Aqueous (mg/kg)
Lab Sample Number						
Sampling Date						
Sampling Depth (feet)						
Matrix						
Units						
<b>VOLATILE COMPOUNDS (GC/MS)</b>						
Benzene	3	13	1	ND	NA	ND
Toluene	1,000	1000	500	ND	NA	ND
Ethylbenzene	1,000	1000	100	ND	NA	ND
Xylene(Total)	410	1000	67	ND	NA	ND
Total Confident Conc. VOAs (s)	1,000	1,000	1,000	ND	NA	ND
Total Estimated Conc. VOA TICs (s)	1,000	1,000	1,000	ND	NA	ND
<b>PCBs</b>						
Aroclor-1016	0.49	2	50	NA	ND	NA
Aroclor-1221	0.49	2	50	NA	ND	NA
Aroclor-1232	0.49	2	50	NA	ND	NA
Aroclor-1242	0.49	2	50	NA	ND	NA
Aroclor-1248	0.49	2	50	NA	ND	NA
Aroclor-1254	0.49	2	50	NA	ND	NA
Aroclor-1260	0.49	2	50	NA	ND	NA

**TPH - Total Petroleum Hydrocarbons**

VO+10 - Volatile organic compounds plus a search of ten non-targeted compounds  
 BN+15 - Base neutral compounds plus search of fifteen non-targeted compounds  
 PP+40 - Priority pollutant compounds plus a forward library search of forty non-targeted compounds

PCB - Poly chlorinated Biphenyls

PP metals - Priority Pollutants metals

GC/MS- Gas Chromatograph/mass spectrometer

ND - Not detected

NA - Not applicable

NS - No standard

Results in excess of the most stringent NJDEP Soil Cleanup Criteria



## **APPENDIX A**

### **USEPA FLOODPLAIN SOIL AND SEDIMENT INVESTIGATION**



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SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM  
EPA CONTRACT 68-W5-0019

January 17, 2000

SEP 3 2002

Eric Wilson, On-Scene Coordinator  
U.S. Environmental Protection Agency  
Removal Action Branch  
2890 Woodbridge Avenue  
Edison, NJ 08837

EPA CONTRACT NO: 68-W5-0019

TDD NO: 02-99-08-0019

DOCUMENT CONTROL NO: START-02-F-03681

SUBJECT: FLOODPLAIN SOIL/SEDIMENT SAMPLING AND ANALYSIS SUMMARY  
REPORT - CORNELL DUBILIER ELECTRONICS

Dear Mr. Wilson:

Enclosed please find the Floodplain Soil/Sediment Sampling and Analysis Summary Report for the Cornell Dubilier Electronics site located in South Plainfield, Middlesex County, New Jersey. If you have any questions or comments, please call me at (732) 225-6116.

Very truly yours,

ROY F. WESTON, INC.

Michael Mahnkopf  
Project Manager

Enclosure

cc: TDD File



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SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM  
EPA CONTRACT 68-W5-0019

## FLOODPLAIN SOIL/SEDIMENT SAMPLING AND ANALYSIS SUMMARY REPORT

### CORNELL DUBILIER ELECTRONICS SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY

Prepared by

Superfund Technical Assessment and Response Team  
Roy F. Weston, Inc.  
Federal Programs Division  
Edison, New Jersey 08837

Prepared for

U.S. Environmental Protection Agency  
Region II - Removal Action Branch  
Edison, New Jersey 08837

DCN #: START-02-F-03681  
TDD #: 02-99-08-0019  
EPA Contract No.: 68-W5-0019

Approved by:

START

Michael Mahnkopf  
Project Manager

Date: 01/17/00

START

Dan Crouse  
Group Leader

Date: 01-17-00

EPA

Date: \_\_\_\_\_

Eric Wilson  
On-Scene Coordinator





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## 1.0 BACKGROUND

The Cornell-Dubilier Site is located at 333 Hamilton Boulevard in South Plainfield, Middlesex County, New Jersey (Attachment A, Figure 1). The site is approximately 25 acres in size. Facing Hamilton Boulevard are several buildings currently occupied by approximately 15 businesses. The rear of the property consists of an open field and adjoining wetlands. The facility is currently known as Hamilton Industrial Park.

The site is bordered by Hamilton Boulevard to the northwest, Spicer Avenue to the southwest, a wetlands area to the southeast, the Bound Brook and Conrail railroad tracks to the northeast. The Bound Brook traverses the southeast section of the site.

Cornell-Dubilier operated at the site from 1936 to 1962, manufacturing electronic components, including capacitors. It is alleged that during its operation, Cornell-Dubilier disposed of polychlorinated biphenyl (PCB) contaminated materials and other hazardous substances at the site.

Previous investigations have identified PCBs and heavy metals at the Cornell-Dubilier site and in the Bound Brook downstream of the site. Water, sediment and fish samples were collected from the Bound Brook at one (1) location adjacent to the site, three (3) locations between the site and New Market Pond, and two (2) locations in New Market Pond. Samples were also collected from one (1) location upstream of the site.

Sampling events were conducted on neighboring residential and commercial areas in June and October, 1997 and April and May, 1998. The purpose was to identify off-site migration of contaminants from the Cornell-Dubilier site on these surrounding areas.

Sampling events were conducted along the Bound Brook in August, September, October, November and December, 1997 to identify PCB contamination upstream, midstream, and/or downstream of the Cornell-Dubilier site.

## 2.0 OBJECTIVE/SAMPLING APPROACH

The objective of this investigation was to characterize PCB contamination in the floodplain of the Bound Brook in Reaches 5 and 6 (as defined in the "Soil And Sediment Sampling And Analysis Report; Cornell Dubilier Electronics - Bound Brook", dated 09/07/98). Reaches 5 and 6 had the highest mean surface soil PCB concentrations of the areas investigated in August through December 1997.

The areas chosen for this investigation were selected based on their proximity to high use areas. This data will be used for risk assessment and to determine if additional investigations are required to evaluate health concerns.

In accordance with the June 16, 1999 Floodplain Sampling QA/QC Work Plan (DCN: START-02-F-03620), surface (0-2") soil samples were collected from Areas 1-4 described below.

- Area 1. Veteran's Memorial Park, bordered by Cedar Brook to the north, residential properties located on Kaine Street to the east, and Bound Brook to the south. Thirty-four (34) surface soil samples were collected from this area of concern. Sample locations were determined in the field utilizing a systematic sampling scheme based on 120' spacing.
- Area 2. Area located on the north side of Cedar Brook, between Lowden and Oakmoor Avenues. Seventeen (17) surface soil and four (4) surface sediment samples were collected from this area of concern. Sample locations were determined in the field utilizing a systematic sampling scheme based on 75' spacing.
- Area 3. Area located on the north side of Bound Brook in the vicinity of Fred Allen Drive. Twenty-eight (28) surface soil samples were collected from this area of concern. Sample locations were determined in the field utilizing a systematic sampling scheme based on 75' spacing.
- Area 4. Area located adjacent to stream 14-14-2-3 (as identified on the Flood Insurance Map for the Township of Piscataway), south of New Market Avenue and 525' east of Highland Avenue. Nineteen (19) surface soil and two (2) surface sediment samples were collected from this area of concern. Sample locations were determined in the field utilizing a systematic sampling scheme based on 50' spacing.

Results of the screening soil samples will be evaluated to determine if additional sampling is required to delineate the horizontal extent of PCB contamination or assess risk.

### 3.0 SAMPLING & ANALYSIS

Soil sampling activities were performed on June 21, June 22 and June 23, 1999 by the following personnel:

1. Eric Wilson - USEPA, Region II
2. Michael Mahnkopf - START, Region II
3. John Brennan - START, Region II
4. Patrick Austin - START, Region II
5. Jeremy Sawetz - START, Region II

All soil samples were collected utilizing dedicated plastic scoops and/or spatulas. All soil samples were analyzed by Southwest Labs of Oklahoma, 1700 West Albany, Suite C, Broken Arrow, OK, 74012, (918) 251-0545.

For additional information, see the June 29, 1999 Trip Report included as Appendix 2 and project logbook # START-02-209.

### **3.1 Area 1**

Pursuant to the procedures discussed above in Section 2.0, thirty-two (32) surface (0-2") soil samples (A1-01 through A1-18, A1-20 through A1-32, A1-34) were collected and analyzed for total PCBs. Soil sample locations are shown on Figure 2.

QA/QC samples included the collection of two (2) field duplicate samples (A1-19 was the duplicate of A1-18; A1-33 was the duplicate of A1-32) and two (2) matrix spike/matrix spike duplicate samples (A1-20 MS/MSD; A1-29 MS/MSD). Samples A1-19, A1-33, A1-20 MS/MSD and A1-29 MS/MSD were analyzed for total PCBs.

Analytical results indicate soil samples A1-01 through A1-34 exhibited total PCB concentrations which ranged from non-detect (A1-34) to 25 ppm (A1-26). Aroclor-1254 accounted for the total concentration of PCB detected in all samples except A1-14. Aroclor 1248 and Aroclor 1254 were detected in sample A1-14 at 0.21 ppm and 0.17 ppm respectively. Analytical results are summarized in Table 1 and the laboratory Form I's and data validation results are included as Appendix 3.

### **3.2 Area 2**

Pursuant to the procedures discussed above in Section 2.0, sixteen (16) surface (0-2") soil samples (A2-01 through A2-011, A2-13 through A2-17) and four (4) surface (0-2") sediment samples (A2-18 through A2-21) were collected and analyzed for total PCBs. Soil sample locations are shown on Figure 3.

QA/QC samples included the collection of one (1) field duplicate sample (A2-12 was the duplicate of A2-11) and one (1) matrix spike/matrix spike duplicate sample (A2-06 MS/MSD). Samples A2-12 and A2-06 MS/MSD were analyzed for total PCBs.

Analytical results indicate soil samples A2-01 through A2-21 exhibited total PCB concentrations which ranged from 0.060 ppm (A2-18) to 2.0 ppm (A2-17). Aroclor-1254 accounted for the total concentration of PCB detected in all samples. Analytical results are summarized in Table 2 and the laboratory Form I's and data validation results are included as Appendix 3.

### 3.3 Area 3

Pursuant to the procedures discussed above in Section 2.0, twenty-six (26) surface (0-2") soil samples (A3-01, A3-03 through A3-23, A3-25 through A3-28) were collected and analyzed for total PCBs. Soil sample locations are shown on Figure 4.

QA/QC samples included the collection of two (2) field duplicate samples (A3-02 was the duplicate of A3-01; A3-24 was the duplicate of A3-23) and two (2) matrix spike/matrix spike duplicate samples (A3-04 MS/MSD; A3-21 MS/MSD). Samples A3-02, A3-24, A3-04 MS/MSD and A3-21 MS/MSD were analyzed for total PCBs.

Analytical results indicate soil samples A3-01 through A3-28 exhibited total PCB concentrations which ranged from 2.5 ppm (A3-21) to 7.5 ppm (A3-14). Aroclor-1254 accounted for the total concentration of PCB detected in all samples. Analytical results are summarized in Table 3 and the laboratory Form I's and data validation results are included as Appendix 3.

### 3.4 Area 4

Pursuant to the procedures discussed above in Section 2.0, eighteen (18) surface (0-2") soil samples (A4-01 through A4-08, A4-10 through A4-19) and two (2) surface (0-2") sediment samples (A4-20, A4-21) were collected and analyzed for total PCBs. Soil sample locations are shown on Figure 5.

QA/QC samples included the collection of one (1) field duplicate sample (A4-09 was the duplicate of A4-08) and one (1) matrix spike/matrix spike duplicate sample (A4-10 MS/MSD). Samples A4-09 and A4-10 MS/MSD were analyzed for total PCBs.

Analytical results indicate soil samples A4-01 through A4-21 exhibited total PCB concentrations which ranged from non-detect (A4-01, A4-02, A4-06, A4-13, A4-18, A4-21) to 0.21 ppm (A4-15). Aroclor-1254 accounted for the total concentration of PCB detected in all samples. Analytical results are summarized in Table 4 and the laboratory Form I's and data validation results are included as Appendix 3.

## 4.0 CONTROL POINT LOCATIONS

In order to document sample locations, several control points were established in Areas 1 - 4 as follows:

Area 1. Two (2) control points were established utilizing existing structures. Utility pole # 6309SPF served as control point 1 (C1). Utility pole # 7855 served as control point 2 (C2) and was located 480' north of C1. C1 and C2 formed the baseline for 120' grid spacing in this area. See Figure 2 for control point locations.

- Area 2. Fence posts were installed along the centerline of the Cedar Brook and designated as control points. Control points 1, 2 and 3 (C1, C2, C3) were installed at the designated 0', 300' and 525' intervals respectively. C1, C2 and C3 formed the baseline for 75' grid spacing in this area. See Figure 3 for control point locations.
- Area 3. Fence posts were installed along the centerline of the Bound Brook and designated as control points. Control points 1, 2, 3 and 4 (C1, C2, C3, C4) were installed at the designated 0', 300', 600' and 900' intervals respectively. C1, C2, C3 and C4 formed the baseline for 75' grid spacing in this area. See Figure 4 for control point locations.
- Area 4. Two (2) control points were installed in Area 4. Control point 1 (C1) was installed 100' west of the centerline of stream 14-14-2-3 and 14.5' west of utility pole #63498 and is located at the south edge of the sidewalk (south side of New Market Avenue). Control point 2 (C2) is located 290' south of C1. The line formed by control points C1 and C2 is perpendicular to New Market Avenue and serves as the baseline for a 50' sampling grid for this area. See Figure 5 for control point locations.

On June 25, 1999, locational data was obtained for all control points discussed above using a global positioning system (GPS) unit operated by a representative of USEPA's Division of Environmental Science and Assessment (DESA). See Table 5 for locational data.

## **5.0 SITE SPECIFIC QUALITY ASSURANCE/QUALITY CONTROL PLAN**

The objective of this QA/QC plan is to provide analytical results which are legally defensible in a court of law. The QA/QC plan incorporated procedures for field sampling, chain of custody, laboratory analyses, and reporting to assure generation of sound analytical results. Sampling procedures were conducted in accordance with USEPA protocols.

### **5.1 Sampling Equipment and Methods**

Samples were collected at the locations and depths as described in this report. Procedural changes dictated by field conditions were fully documented in the field notes and the trip report.

Equipment utilized for this project were dedicated plastic scoops and spatulas.

All samples were transferred immediately after collection into sample bottles selected by parameter as listed below. Sample bottles used for this project were prepared in accordance with USEPA criteria for polychlorinated biphenyls (PCBs).

The type of sample container required for the Cornell Dubilier Electronics floodplain soil/sediment investigation were as follows:

- a. Polychlorinated Biphenyls - 8 oz. glass bottle with teflon closure.

All soil samples were packed on ice immediately following collection.

All samples were labeled with the following information:

- a. sample number;
- b. date and time of collection;
- c. site name;
- d. sample collector's initials;
- e. analyses required.

Accurate field notes were maintained which included the information listed above. Additional information included, but was not limited to:

- a. sample location sketch;
- b. sample method;
- c. general comments, including any modification from the sample plan.

## 5.2 Chain of Custody

Chain of custody was maintained for all samples. Chain of custody originated with the collection of the samples and was maintained until the samples were relinquished to the laboratory. The chain of custody form detailed the following information:

- a. sample identification number;
- b. sample collection date and time;
- c. sample matrix;
- d. expected contaminant concentration (low, medium, high);
- e. sample type (grab or composite);
- f. sample preservation;
- g. analytical parameters;
- h. name(s) and signatures(s) of sampler(s);
- i. signatures(s) of individual(s) with control over samples.

### **5.3 Quality Assurance/Quality Control Samples**

The matrix for all samples included in this investigation was soil/sediment. QA/QC samples included the collection of one (1) field duplicate and one (1) matrix spike/matrix spike duplicate sample for each matrix (soil/sediment) per sampling date at a ratio of one (1) per twenty (20) samples. Extra volume was submitted to allow the laboratory to perform matrix spike sample analysis. This analysis provides information about the effect of sample matrix digestion and measurement methodology. Field duplicate samples provide an indication of sample homogeneity and were not identified to the laboratory.

### **5.4 Sample QA/QC Data**

A CLP format deliverable QA/QC package was provided for all samples submitted for analysis.

## **6.0 DATA VALIDATION**

Data was evaluated in accordance with Region II guidelines using the following data validation SOP: SOP HW-6, "USEPA Region II Data Validation SOP for Statement of Work OLCO 3.2, Rev.11, June 1996". Laboratory analytical results were assessed by the data reviewer for compliance with required precision, accuracy, completeness, representativeness, and sensitivity.

Data validation was performed by ESAT, Region II under the USEPA Contract Laboratory Program. Data validation results indicate that the analytical results are valid and acceptable. For specific comments, see the Data Validation Results included as Appendix 3.



# TABLE - 1 PCB DATA (Area 1)

SITE NAME: Cornell - Dubiller Electronics  
SAMPLING DATE: June 21, 1999

UNITS: ug/kg (unless otherwise indicated)

Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample ID #	A1-01	A1-02	A1-03	A1-04	A1-05	A1-06	A1-07	A1-08	A1-09	A1-10	A1-11	
CLP Sample #	BWZ-06	BWZ-07	BWZ-08	BWZ-09	BWZ-10	BWZ-11	BWZ-12	BWZ-13	BWZ-14	BWZ-15	BWZ-16	
Lab ID #	39092.01	39092.02	39092.03	39092.04	39092.05	39092.06	39092.07	39092.08	39092.09	39092.10	39092.11	
Percent Moisture	20	12	7	15	12	12	8	12	6	10	9	
Dilution Factor	1	1	1	1	1	1	1	1	1	1	1	
PCB	40 U	36 U	33 U	36 U	37 U	37 U	34 U	35 U	34 U	35 U	35 U	
Aroclor-1016	82 U	74 U	68 U	74 U	75 U	76 U	68 U	70 U	68 U	72 U	72 U	
Aroclor-1221	40 U	36 U	33 U	36 U	37 U	37 U	34 U	35 U	34 U	35 U	35 U	
Aroclor-1232	40 U	36 U	33 U	36 U	37 U	37 U	34 U	35 U	34 U	35 U	35 U	
Aroclor-1242	40 U	36 U	33 U	36 U	37 U	37 U	34 U	35 U	34 U	35 U	35 U	
Aroclor-1248	300 J	280 J	240 J	1300	82 JN	480	150 J	540	120 JN	170 J	120 J	
Aroclor-1254	40 U	36 U	33 U	36 U	37 U	37 U	34 U	35 U	34 U	35 U	35 U	
Aroclor-1260	0.30 J	0.28 J	0.24 J	1.3	0.082 JN	0.48	0.15 J	0.54	0.12 JN	0.17 J	0.12 J	
Total PCB (mg/kg)												

Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample ID #	A1-12	A1-13	A1-14	A1-15	A1-16	A1-17	A1-18	A1-19	A1-20	A1-21	A1-22	
CLP Sample #	BWZ-17	BWZ-18	BWZ-19	BWZ-20	BWZ-21	BWZ-22	BWZ-23	BWZ-24	BWZ-25	BWZ-26	BWZ-27	
Lab ID #	39092.12	39092.13	39092.14	39092.15	39092.16	39092.17	39092.18	39092.19	39092.20	39092.21	39092.22	
Percent Moisture	11	12	8	12	7	8	16	14	20	9	17	
Dilution Factor	1	1	1	1	1	1	10	10	1	1	1	
PCB	34 U	36 U	35 U	38 U	35 U	35 U	380 U	380 U	41 U	36 U	38 U	
Aroclor-1016	69 U	73 U	72 U	76 U	72 U	71 U	780 U	770 U	84 U	73 U	77 U	
Aroclor-1221	34 U	36 U	36 U	38 U	35 U	35 U	380 U	380 U	41 U	36 U	38 U	
Aroclor-1232	34 U	36 U	36 U	38 U	35 U	35 U	380 U	380 U	41 U	36 U	38 U	
Aroclor-1242	34 U	36 U	36 U	38 U	35 U	35 U	380 U	380 U	41 U	36 U	38 U	
Aroclor-1248	34 U	36 U	210 J	38 U	35 U	35 U	5500	6300	1800	1000 D	290	
Aroclor-1254	310	84	170	380	190 J	200	380 U	380 U	41 U	36 U	38 U	
Aroclor-1260	34 U	36 U	36 U	38 U	35 U	35 U	5.5	6.3	1.6	1.0 D	0.29	
Total PCB (mg/kg)	0.31	0.084 J	0.38 J	0.38	0.19 J	0.20						

Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample ID #	A1-23	A1-24	A1-25	A1-26	A1-27	A1-28	A1-29	A1-30	A1-31	A1-32	A1-33	A1-34
CLP Sample #	BWZ-28	BWZ-29	BWZ-30	BWZ-31	BWZ-32	BWZ-33	BWZ-34	BWZ-35	BWZ-36	BWZ-37	BWZ-38	BWZ-39
Lab ID #	39092.23	39092.24	39092.25	39092.26	39092.27	39092.28	39092.29	39092.30	39092.31	39092.32	39092.33	39092.34
Percent Moisture	16	5	11	10	13	8	16	10	13	8	9	9
Dilution Factor	1	1	1	1	1	1	1	1	1	1	1	1
PCB	39 U	34 U	36 U	35 U	36 U	36 U	39 U	37 U	37 U	34 U	34 U	34 U
Aroclor-1016	80 U	70 U	72 U	72 U	74 U	73 U	78 U	74 U	75 U	69 U	69 U	69 U
Aroclor-1221	39 U	34 U	36 U	35 U	36 U	36 U	39 U	37 U	37 U	34 U	34 U	34 U
Aroclor-1232	39 U	34 U	36 U	35 U	36 U	36 U	39 U	37 U	37 U	34 U	34 U	34 U
Aroclor-1242	39 U	34 U	36 U	35 U	36 U	36 U	39 U	37 U	37 U	34 U	34 U	34 U
Aroclor-1248	21000 D	6400 D	6600 D	25000 D	3100 D	120	190	120	2700 D	720 J	740 J	34 U
Aroclor-1254	39 U	34 U	36 U	35 U	36 U	36 U	39 U	37 U	37 U	34 U	34 U	34 U
Aroclor-1260	21 D	6.4 D	6.6 D	25 D	3.1 D	0.12	0.19	0.12	2.7 D	0.72 J	0.74 J	U
Total PCB (mg/kg)												

U - Non-detected compound.  
UJ - Analyte was not detected. The reported quantitation limit is qualified estimated.  
J - Estimated Value  
JN - Presumptive evidence of a compound at an estimated value.  
D - From Dilution

# TABLE - 2 PCB DATA (Area 2)

SITE NAME: Cornell - Dubilier Electronics  
SAMPLING DATE: June 22, 1999

UNITS: ug/kg (unless otherwise indicated)

Matrix Sample ID # CLP Sample # Lab ID # Percent Moisture Dilution Factor	Soil A2-01 BWZ-43 39116.01 16 1	Soil A2-02 BWZ-44 39116.02 9 1	Soil A2-03 BWZ-45 39116.03 20 1	Soil A2-04 BWZ-46 39116.04 23 1	Soil A2-05 BWZ-47 39116.05 18 1	Soil A2-06 BWZ-48 39116.06 21 1	Soil A2-07 BWZ-49 39116.07 21 1	Soil A2-08 BWZ-50 39116.08 36 10	Soil A2-09 BWZ-51 39116.09 39 10	Soil A2-10 BWZ-52 39116.10 26 10	Soil A2-11 BWZ-53 39116.11 22 10
PCB											
Aroclor-1016	38 U	34 U	40 U	42 U	40 U	40 U	40 U	480 U	510 U	430 U	420 U
Aroclor-1221	77 U	68 U	81 U	86 U	80 U	82 U	82 U	980 U	1000 U	880 U	860 U
Aroclor-1232	38 U	34 U	40 U	42 U	40 U	40 U	40 U	480 U	510 U	430 U	420 U
Aroclor-1242	38 U	34 U	40 U	42 U	40 U	40 U	40 U	480 U	510 U	430 U	420 U
Aroclor-1248	38 U	34 U	40 U	42 U	40 U	40 U	40 U	480 U	510 U	430 U	420 U
Aroclor-1254	580 D	120	780 D	95	880 D	730 D	940 D	1100 J	800 J	1100	1000
Aroclor-1260	38 U	34 U	40 U	42 U	40 U	40 U	40 U	480 U	510 U	430 U	420 U
Total PCB (mg/kg)	0.58 D	0.12	0.78 D	0.095	0.88 D	0.73 D	0.94 D	1.1 J	0.8 J	1.1	1

Matrix Sample ID # CLP Sample # Lab ID # Percent Moisture Dilution Factor	Soil A2-12 BWZ-54 39116.12 23 10	Soil A2-13 BWZ-55 39116.13 19 10	Soil A2-14 BWZ-56 39116.14 22 10	Soil A2-15 BWZ-57 39116.15 24 10	Soil A2-16 BWZ-58 39116.16 30 10	Soil A2-17 BWZ-59 39116.17 26 10	Soil A2-18 BWZ-60 39116.18 21 10	Soil A2-19 BWZ-61 39116.19 46 10	Soil A2-20 BWZ-62 39116.20 41 10	Soil A2-21 BWZ-63 39116.21 26 1
PCB										
Aroclor-1016	420 U	410 U	400 U	420 U	460 U	430 U	410 U	610 U	550 U	44 U
Aroclor-1221	860 U	820 U	800 U	850 U	940 U	860 U	840 U	1200 U	1100 U	89 U
Aroclor-1232	420 U	410 U	400 U	420 U	460 U	430 U	410 U	610 U	550 U	44 U
Aroclor-1242	420 U	410 U	400 U	420 U	460 U	430 U	410 U	610 U	550 U	44 U
Aroclor-1248	420 U	410 U	400 U	420 U	460 U	430 U	410 U	610 U	550 U	44 U
Aroclor-1254	1000	360 J	670 J	850	320 J	2000	60 J	580 J	180 J	480 DJ
Aroclor-1260	420 U	410 U	400 U	420 U	460 U	430 U	410 U	610 U	550 U	44 U
Total PCB (mg/kg)	1	0.38 J	0.67 J	0.85	0.32 J	2	0.06 J	0.58 J	0.18 J	0.48 DJ

U - Non-detected compound.  
UJ - Analyte was not detected. The reported quantitation limit is qualified estimated.  
J - Estimated Value  
JN - Presumptive evidence of a compound at an estimated value.  
D - From Dilution

**SITE NAME: Cornell - Dubilier Electronics**  
**SAMPLING DATE: June 23, 1999**

**SITE NAME: Cornell - Dubilier Electronics**  
**SAMPLING DATE: June 23, 1999**

**UNITS: ug/kg (unless otherwise indicated)**

UNITS: ug/kg (unless otherwise indicated)												
Matrix	Soil A3-01 BWZ-64 39129.01	Soil A3-02 BWZ-65 39129.02	Soil A3-03 BWZ-66 39129.03	Soil A3-04 BWZ-67 39129.04	Soil A3-05 BWZ-68 39129.05	Soil A3-06 BWZ-69 39129.06	Soil A3-07 BWZ-70 39129.07	Soil A3-08 BWZ-71 39129.08	Soil A3-09 BWZ-72 39129.09	Soil A3-10 BWZ-73 39129.10	Soil A3-11 BWZ-74 39129.11	Soil A3-12 BWZ-75 39129.12
Sample ID #	25	25	35	23	38	28	47	23	33	30	18	
CLP Sample #	25	25	35	23	38	28	47	23	33	30	18	
Lab ID #	25	25	35	23	38	28	47	23	33	30	18	
Percent Moisture	10	10	10	10	10	10	10	10	10	10	10	
Dilution Factor												
PCB												
Aroclor-1016	440 U	420 U	510 U	400 U	530 U	430 U	620 U	420 U	480 U	470 U	400 U	
Aroclor-1221	890 U	860 U	1000 U	800 U	1100 U	870 U	1200 U	860 U	970 U	950 U	810 U	
Aroclor-1232	440 U	420 U	510 U	400 U	530 U	430 U	620 U	420 U	480 U	470 U	400 U	
Aroclor-1242	440 U	420 U	510 U	400 U	530 U	430 U	620 U	420 U	480 U	470 U	400 U	
Aroclor-1248	440 U	420 U	510 U	400 U	530 U	430 U	620 U	420 U	480 U	470 U	400 U	
Aroclor-1254	4600	4700	4000	4500	3400	3700	3800	4900	3800	4400	5200	
Aroclor-1260	440 U	420 U	510 U	400 U	530 U	430 U	620 U	420 U	480 U	470 U	400 U	
total PCB (mg/kg)	4.6	4.7	4	4.5	3.4	3.7	3.8	4.9	3.8	4.4	5.2	

Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample ID #	A3-12	A3-13	A3-14	A3-15	A3-16	A3-17	A3-18	A3-19	A3-20	A3-21	A3-22	Soil
CLP Sample #	BWZ-75	BWZ-76	BWZ-77	BWZ-78	BWZ-79	BWZ-80	BWZ-81	BWZ-82	BWZ-83	BWZ-84	BWZ-85	
Lab ID #	39129.12	39129.13	39129.14	39129.15	39129.16	39129.17	39129.18	39129.19	39129.20	39129.21	39129.22	
Percent Moisture	30	29	28	26	33	61	26	55	19	25	34	
Dilution Factor	10	10	10	10	10	10	10	10	10	10	10	
PCB												
Aroclor-1016	460 U	460 U	440 U	440 U	490 U	820 UJ	440 U	720 UJ	380 U	440 U	480 U	
Aroclor-1221	930 U	940 U	900 U	890 U	1000 U	1600 UJ	890 U	1500 UJ	760 U	890 U	980 U	
Aroclor-1232	460 U	460 U	440 U	440 U	490 U	820 UJ	440 U	720 UJ	380 U	440 U	480 U	
Aroclor-1242	460 U	460 U	440 U	440 U	490 U	820 UJ	440 U	720 UJ	380 U	440 U	480 U	
Aroclor-1248	460 U	460 U	440 U	440 U	490 U	820 UJ	440 U	720 UJ	380 U	440 U	480 U	
Aroclor-1254	5800	5900	7500	4000	5000	4200 J	4700	4100 J	5700	2500	2700	
Aroclor-1260	460 U	460 U	440 U	440 U	490 U	820 UJ	440 U	720 UJ	380 U	440 U	480 U	
Total PCB (mg/kg)	5.8	5.9	7.5	4	5	4.2 J	4.7	4.1 J	5.7	2.5	2.7	

Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Sample ID #	A3 - 23	A3 - 24	A3 - 25	A3 - 26	A3 - 27	A3 - 28
CLP Sample #	BWZ-86	BWZ-87	BWZ-88	BWZ-89	BWZ-90	BWZ-91
Lab ID #	39129.23	39129.24	39129.25	39129.26	39129.27	39129.28
Percent Moisture	68	68	31	52	29	55
Dilution Factor	10	10	10	10	10	10
PCB						
Aroclor-1016	1000 UJ	950 UJ	460 U	670 U	450 U	710 U
Aroclor-1221	2100 UJ	1900 UJ	940 U	1400 U	920 U	1400 U
Aroclor-1232	1000 UJ	950 UJ	460 U	670 U	450 U	710 U
Aroclor-1242	1000 UJ	950 UJ	460 U	670 U	450 U	710 U
Aroclor-1248	1000 UJ	950 UJ	460 U	670 U	450 U	710 U
Aroclor-1254	3700 J	3200 J	3000 J	6000 J	2900 J	3100 J
Aroclor-1260	1000 UJ	950 UJ	460 U	670 U	450 U	710 U
Total PCB (mp/ka)	3.7 J	3.2 J	3 J	6 J	2.9 J	3.1 J

U - Non-detected compound. The reported quantitation limit is qualified estimated. Analyte was not detected.

**U.U.**- Analyte was not detected. The reported quantitation limit is q

**JN - Presumptive evidence of a compound at an estimated value.**  
**D- From Dilution**

# TABLE - 4 PCB DATA (Area 4)

SITE NAME: Cornell - Dubilier Electronics

SAMPLING DATE: June 21, 1999

UNITS: ug/kg (unless otherwise indicated)

Matrix	Sample ID #	CLP Sample #	Lab ID #	Percent Moisture	Dilution Factor	Soil A4-01 BWZ-96 39116.22 27 1	Soil A4-02 BWZ-97 39116.23 6 1	Soil A4-03 BWZ-98 39116.24 16 1	Soil A4-04 BWZ-99 39116.25 10 1	Soil A4-05 BXA-00 39116.28 9 1	Soil A4-06 BXA-01 39116.27 8 1	Soil A4-07 BXA-02 39116.28 9 1	Soil A4-08 BXA-03 39116.29 9 1	Soil A4-09 BXA-04 39116.30 7 1	Soil A4-10 BXA-05 39116.31 5 1	Soil A4-11 BXA-06 39116.32 9 1
PCB																
Aroclor-1016						45 U	35 U	39 U	36 U	36 U	36 U	36 U	36 U	36 U	35 U	34 U
Aroclor-1221						91 U	70 U	80 U	73 U	73 U	72 U	73 U	73 U	73 U	72 U	69 U
Aroclor-1232						45 U	35 U	39 U	36 U	36 U	36 U	36 U	36 U	36 U	35 U	34 U
Aroclor-1242						45 U	35 U	39 U	36 U	36 U	36 U	36 U	36 U	36 U	35 U	34 U
Aroclor-1248						45 U	35 U	39 U	36 U	36 U	36 U	36 U	36 U	36 U	35 U	34 U
Aroclor-1254						45 U	35 U	80 J	100 J	60 J	36 U	74 J	130 J	98 J	55 J	96 J
Aroclor-1260						45 U	35 U	39 U	36 U	36 U	36 U	36 U	36 U	35 U	34 U	35 U
Total PCB (mg/kg)						U	U	0.08 J	0.1 J	0.06 J	U	0.074 J	0.13 J	0.098 J	0.055 J	0.096 J

Matrix	Soil A4 - 12 BXA-07 39116.33 7 1	Soil A4 - 13 BXA-08 39116.34 12 1	Soil A4 - 14 BXA-09 39116.35 13 1	Soil A4 - 15 BXA-10 39116.36 12 1	Soil A4 - 16 BXA-11 39116.37 15 1	Soil A4 - 17 BXA-12 39116.38 15 1	Soil A4 - 18 BXA-13 39116.39 12 1	Soil A4 - 19 BXA-14 39116.40 9 1	Soil A4 - 20 BXA-15 39116.41 24 1	Soil A4-21 BXA-16 39092.42 18 1
PCB										
Aroclor-1016	34 U	38 U	38 U	37 U	37 U	38 U	36 U	35 U	43 U	39 U
Aroclor-1221	68 U	76 U	76 U	74 U	76 U	77 U	74 U	72 U	88 U	79 U
Aroclor-1232	34 U	38 U	38 U	37 U	37 U	38 U	36 U	35 U	43 U	39 U
Aroclor-1242	34 U	38 U	38 U	37 U	37 U	38 U	36 U	35 U	43 U	39 U
Aroclor-1248	34 U	38 U	38 U	37 U	37 U	38 U	36 U	35 U	43 U	39 U
Aroclor-1254	93 J	38 U	38 U	210	140 J	130 J	36 U	40	55	39 U
Aroclor-1260	34 U	38 U	38 U	37 U	37 U	38 U	36 U	35 U	43 U	39 U
Total PCB (mg/kg)	0.093 J	U	0.14 J	0.21	0.14 J	0.13 J	U	0.04	0.055	U

U - Non-detected compound.

UJ - Analyte was not detected. The reported quantitation limit is qualified estimated.

J - Estimated Value

JN - Presumptive evidence of a compound at an estimated value.

D - From Dilution

Table 5

GPS Points for cornell-Dubilier Site  
 Table References Coordinates for  
 Geographic, WGS84 Projection (Decimal Degrees)  
 and  
 NJ State Plane, WGS 84 Projection (feet)

SITE_NAME	POINT_ID	COMMENT	MAD_LAT_DD	MAD_LON_DD	X_COORD NJ State Plane (ft)	Y_COORD NJ State Plane (ft)
Area 1	C1	POLE 6309 SPF	40.580044	-74.415561	51577.94875	636217.99593
Area 1	C2	POLE 7855	-40.581350	-74.415550	51580.57492	636693.50270
Area 2	C1	CENTER LINE CEDEAR BROOK	40.581962	-74.417695	514984.63721	636916.08732
Area 2	C2		40.581787	-74.418741	514694.09647	636851.95905
Area 2	C3		40.581703	-74.419535	514473.59495	636821.14425
Area 4	C1	POLE 63498 SPF	40.579098	-74.424783	513016.91634	635870.89595
Area 4	C2		40.578413	-74.425293	512875.48703	635621.27572
Area 3	C1	AT STREAM 14-14-2-3	40.580933	-74.424671	513047.35671	636539.58521
Area 3	C2		40.580924	-74.425752	512747.22419	636536.02086
Area 3	C3		40.581156	-74.426770	512464.24132	636620.09911
Area 3	C4		40.581358	-74.427821	512172.38676	636693.63551

## Notes:

Points Collected with Trimble Pro XR GPS unit. Points were differentially corrected using Trimble Pathfinder Software. Corrected points were exported to ArcView Shapefile, in geographic projection and WGS datum. Exported Shapefile was then reprojected (using ArcView reproduction tool) into NJ State Plane (feet), WGS84 datum. From there, an ArcView Script (View\_AddXYCoordTOFTab) was loaded compiled, and run on the Feature Table (Ftab) of the reprojected shapefile. The above table is an Impot of selected fields of the final Flab.

## **APPENDIX 1**

### **SITE MAPS/FIGURES**

**APPENDIX 2**

**TRIP REPORT - JUNE 29, 1999**



Roy F. Weston, Inc.  
Federal Programs Division  
Suite 201  
1090 King Georges Post Road  
Edison, New Jersey 08837-3703  
732-225-6116 • Fax 732-225-7037

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM  
EPA CONTRACT 68-W5-0019

29 June 1999

Mr. Eric Wilson  
U.S. Environmental Protection Agency  
Removal Action Branch  
2890 Woodbridge Avenue  
Edison, New Jersey 08837


TDD NO: 02-98-08-0072  
DCN NO: START-02-F-03656  
SUBJECT: RESIDENTIAL SOIL SAMPLING TRIP REPORT  
CORNELL-DUBILIER ELECTRONICS,  
SOUTH PLAINFIELD, NEW JERSEY

Dear Mr. Wilson:

Enclosed please find one (1) copy of the Sampling Trip Report for the floodplain soil/sediment sampling episode conducted at Cornell-Dubilier Electronics from 21 - 23 June 1999. If you have any questions or comments, please contact me at (732) 225-6116 or (609) 499-6542.

Sincerely,

ROY F. WESTON, INC.

  
Michael Mahnkopf  
Project Manager

cc: John Bulich, Region II ESAT/RSCC

Enclosure



## SAMPLING TRIP REPORT

**SITE NAME:** Cornell-Dubilier Electronics  
DCN #: START-02-F-03656  
TDD #: 02-98-08-0072

**SAMPLE DATES:** 21 - 23 June 1999

**EPA I.D. NO.:** GZ

1. **Site Location:** Former Cornell-Dubilier Electronics  
333 Hamilton Boulevard, South Plainfield, New Jersey

Surface (0-2") soil /sediment samples were collected from the following areas, illustrated in Figure 1:

1. Area A1 - Veteran's Memorial Park
  2. Area A2 - North side of Cedar Brook, between Lowden and Oakmoor Avenues
  3. Area A3 - North side of Bound Brook in the vicinity of Fred Allen Drive
  4. Area A4 - Adjacent to a drainage swale, south of New Market Avenue and approximately 525 feet east of Highland Avenue
2. **Sample Descriptions:** Ninety-eight (98) surface soil samples and six (6) surface sediment (including field duplicates and MS/MSDs) were collected and submitted for total polychlorinated biphenyl (PCB) analysis (Table 1).
3. **Laboratory Receiving Samples:**

Analysis

Name and Address of Laboratory

Total PCBs

Southwest Labs of Oklahoma  
1700 West Albany, Suite C  
Broken Arrow, OK 74012  
(918) 251-0545

4. **Sample Dispatch Data:**

On 21 June 1999, fifty-five (55) samples were shipped by Region II START personnel, via Federal Express (airbill No. 802546321349), to Southwest Labs of Oklahoma.

On 22 June 1999, twenty-one (21) samples were shipped by Region II START personnel, via Federal Express (airbill No. 810158220925), to Southwest Labs of Oklahoma.

On 23 June 1999, twenty-eight (28) samples were shipped by Region II START personnel, via Federal Express (airbill No. 810158220936), to Southwest Labs of Oklahoma.

On-Site Personnel:

<u>Name</u>	<u>Representing</u>	<u>Duties on Site</u>
Eric Wilson	U.S. EPA	On-Scene Coordinator
Michael Mahnkopf	Region II START	Project Manager
John Brennan	Region II START	Sample Management
Patrick Austin	Region II START	Sample Technician
Jeremy Sawetz	Region II START	Sample Technician

6. Additional Comments:

From 21 - 23 June 1999, ninety-eight (98) surface soil samples and six (6) surface sediment samples [one hundred and four (104) samples] were collected from Areas A1 through A4. Of these, six (6) of the samples were field duplicates and six (6) samples were designated for MS/MSD analysis. All samples were collected with dedicated plastic scoops/spatulas. Attached are copies of the Organic Traffic Reports and Chain of Custody Records (Appendix A).

7. Report prepared by: Michael Mahnkopf Date: 28 June 1999

8. Report reviewed by: Mark Huston Date: 28 June 1999

**TABLE 1 - Floodplain Soil/Sediment Sample Description and Analysis**

Cornell-Dubilier Electronics

South Plainfield, NJ

21 - 23 June 1999

Field Sample ID	CLP Sample No.	Tag No.	Matrix	Depth	Date/Time	Analysis	Location *
A1-01	BWZ-06	101	Soil	0-2"	06/21/99 0955 hrs	Total PCBs	Area A1
A1-02	BWZ-07	102	Soil	0-2"	06/21/99 0957 hrs	Total PCBs	Area A1
A1-03	BWZ-08	103	Soil	0-2"	06/21/99 0959 hrs	Total PCBs	Area A1
A1-04	BWZ-09	104	Soil	0-2"	06/21/99 1000 hrs	Total PCBs	Area A1
A1-05	BWZ-10	105	Soil	0-2"	06/21/99 1008 hrs	Total PCBs	Area A1
A1-06	BWZ-11	106	Soil	0-2"	06/21/99 1006 hrs	Total PCBs	Area A1
A1-07	BWZ-12	107	Soil	0-2"	06/21/99 1004 hrs	Total PCBs	Area A1
A1-08	BWZ-13	108	Soil	0-2"	06/21/99 1002 hrs	Total PCBs	Area A1

**TABLE 1 (cont'd.) Floodplain Soil/Sediment Sample Description and Analysis**  
**Cornell-Dubilier Electronics**  
**South Plainfield, NJ**  
**21 - 23 June 1999**

Field Sample ID	CLP Sample No.	Tag No.	Matrix	Depth	Date/Time	Analysis	Location *
A1-09	BWZ-14	109	Soil	0-2"	06/21/99 1010 hrs	Total PCBs	Area A1
A1-10	BWZ-15	110	Soil	0-2"	06/21/99 1012 hrs	Total PCBs	Area A1
A1-11	BWZ-16	111	Soil	0-2"	06/21/99 1014 hrs	Total PCBs	Area A1
A1-12	BWZ-17	112	Soil	0-2"	06/21/99 1020 hrs	Total PCBs	Area A1
A1-13	BWZ-18	113	Soil	0-2"	06/21/99 1010 hrs	Total PCBs	Area A1
A1-14	BWZ-19	114	Soil	0-2"	06/21/99 1020 hrs	Total PCBs	Area A1
A1-15	BWZ-20	115	Soil	0-2"	06/21/99 1022 hrs	Total PCBs	Area A1
A1-16	BWZ-21	116	Soil	0-2"	06/21/99 1026 hrs	Total PCBs	Area A1

**TABLE 1 (cont'd.) Floodplain Soil/Sediment Sample Description and Analysis**  
 Cornell-Dubilier Electronics  
 South Plainfield, NJ  
 21 - 23 June 1999

Field Sample ID	CLP Sample No.	Tag No.	Matrix	Depth	Date/Time	Analysis	Location *
A1-17	BWZ-22	117	Soil	0-2"	06/21/99 1024 hrs	Total PCBs	Area A1
A1-18	BWZ-23	118	Soil	0-2"	06/21/99 1000 hrs	Total PCBs	Area A1
A1-19	BWZ-24	119	Soil	0-2"	06/21/99 1005 hrs	Total PCBs	Duplicate of A1-18
A1-20	BWZ-25	120	Soil	0-2"	06/21/99 1010 hrs	Total PCBs	Area A1 MS/MSD
A1-21	BWZ-26	121	Soil	0-2"	06/21/99 1015 hrs	Total PCBs	Area A1
A1-22	BWZ-27	122	Soil	0-2"	06/21/99 1020 hrs	Total PCBs	Area A1
A1-23	BWZ-28	123	Soil	0-2"	06/21/99 1025 hrs	Total PCBs	Area A1
A1-24	BWZ-29	124	Soil	0-2"	06/21/99 1030 hrs	Total PCBs	Area A1

**TABLE 1 (cont'd.) Floodplain Soil/Sediment Sample Description and Analysis**  
 Cornell-Dubilier Electronics  
 South Plainfield, NJ  
 21 - 23 June 1999

Field Sample ID	CLP Sample No.	Tag No.	Matrix	Depth	Date/Time	Analysis	Location *
A1-25	BWZ-30	125	Soil	0-2"	06/21/99 1020 hrs	Total PCBs	Area A1
A1-26	BWZ-31	126	Soil	0-2"	06/21/99 1022 hrs	Total PCBs	Area A1
A1-27	BWZ-32	127	Soil	0-2"	06/21/99 1025 hrs	Total PCBs	Area A1
A1-28	BWZ-33	128	Soil	0-2"	06/21/99 1045 hrs	Total PCBs	Area A1
A1-29	BWZ-34	129	Soil	0-2"	06/21/99 1040 hrs	Total PCBs	Area A1 MS/MSD
A1-30	BWZ-35	130	Soil	0-2"	06/21/99 1035 hrs	Total PCBs	Area A1
A1-31	BWZ-36	131	Soil	0-2"	06/21/99 1025 hrs	Total PCBs	Area A1
A1-32	BWZ-37	132	Soil	0-2"	06/21/99 1010 hrs	Total PCBs	Area A1

**TABLE 1 (cont'd.) Floodplain Soil/Sediment Sample Description and Analysis**

Cornell-Dubilier Electronics

South Plainfield, NJ

21 - 23 June 1999

Field Sample ID	CLP Sample No.	Tag No.	Matrix	Depth	Date/Time	Analysis	Location *
A1-33	BWZ-38	133	Soil	0-2"	06/21/99 1010 hrs	Total PCBs	Duplicate of A1-32
A1-34	BWZ-39	134	Soil	0-2"	06/21/99 1033 hrs	Total PCBs	Area A4
A4-01	BWZ-96	191	Soil	0-2"	06/21/99 1400 hrs	Total PCBs	Area A4
A4-02	BWZ-97	192	Soil	0-2"	06/21/99 1402 hrs	Total PCBs	Area A4
A4-03	BWZ-98	193	Soil	0-2"	06/21/99 1402 hrs	Total PCBs	Area A4
A4-04	BWZ-99	194	Soil	0-2"	06/21/99 1406 hrs	Total PCBs	Area A4
A4-05	BXA-00	195	Soil	0-2"	06/21/99 1412 hrs	Total PCBs	Area A4
A4-06	BXA-01	196	Soil	0-2"	06/21/99 1416 hrs	Total PCBs	Area A4

**TABLE 1 (cont'd.) Floodplain Soil/Sediment Sample Description and Analysis**

Cornell-Dubilier Electronics

South Plainfield, NJ

21 - 23 June 1999

Field Sample ID	CLP Sample No.	Tag No.	Matrix	Depth	Date/Time	Analysis	Location *
A4-07	BXA-02	197	Soil	0-2"	06/21/99 1430 hrs	Total PCBs	Area A4
A4-08	BXA-03	198	Soil	0-2"	06/21/99 1436 hrs	Total PCBs	Area A4
A4-09	BXA-04	199	Soil	0-2"	06/21/99 1438 hrs	Total PCBs	Duplicate of A4-08
A4-10	BXA-05	200	Soil	0-2"	06/21/99 1430 hrs	Total PCBs	Area A4 MS/MSD
A4-11	BXA-06	201	Soil	0-2"	06/21/99 1428 hrs	Total PCBs	Area A4
A4-12	BXA-07	202	Soil	0-2"	06/21/99 1426 hrs	Total PCBs	Area A4
A4-13	BXA-08	203	Soil	0-2"	06/21/99 1420 hrs	Total PCBs	Area A4
A4-14	BXA-09	204	Soil	0-2"	06/21/99 1440 hrs	Total PCBs	Area A4



**TABLE 1 (cont'd.) Floodplain Soil/Sediment Sample Description and Analysis**

Cornell-Dubilier Electronics

South Plainfield, NJ

21 - 23 June 1999

Field Sample ID	CLP Sample No.	Tag No.	Matrix	Depth	Date/Time	Analysis	Location *
A4-15	BXA-10	205	Soil	0-2"	06/21/99 1440 hrs	Total PCBs	Area A4
A4-16	BXA-11	206	Soil	0-2"	06/21/99 1434 hrs	Total PCBs	Area A4
A4-17	BXA-12	207	Soil	0-2"	06/21/99 1430 hrs	Total PCBs	Area A4
A4-18	BXA-13	208	Soil	0-2"	06/21/99 1424 hrs	Total PCBs	Area A4
A4-19	BXA-14	209	Soil	0-2"	06/21/99 1422 hrs	Total PCBs	Area A4
A4-20	BXA-15	210	Sediment	0-2"	06/21/99 1400 hrs	Total PCBs	Area A4
A4-21	BXA-16	211	Sediment	0-2"	06/21/99 1410 hrs	Total PCBs	Area A4
A2-01	BWZ-43	138	Soil	0-2"	06/22/99 1205 hrs	Total PCBs	Area A2

**TABLE 1 (cont'd.) Floodplain Soil/Sediment Sample Description and Analysis**

Cornell-Dubilier Electronics

South Plainfield, NJ

21 - 23 June 1999.

Field Sample ID	CLP Sample No.	Tag No.	Matrix	Depth	Date/Time	Analysis	Location *
A2-02	BWZ-44	139	Soil	0-2"	06/22/99 1210 hrs	Total PCBs	Area A2
A2-03	BWZ-45	140	Soil	0-2"	06/22/99 1155 hrs	Total PCBs	Area A2
A2-04	BWZ-46	141	Soil	0-2"	06/22/99 1200 hrs	Total PCBs	Area A2
A2-05	BWZ-47	142	Soil	0-2"	06/22/99 1205 hrs	Total PCBs	Area A2
A2-06	BWZ-48	143	Soil	0-2"	06/22/99 1210 hrs	Total PCBs	Area A2 MS/MSD
A2-07	BWZ-49	144	Soil	0-2"	06/22/99 1205 hrs	Total PCBs	Area A2
A2-08	BWZ-50	145	Soil	0-2"	06/22/99 1200 hrs	Total PCBs	Area A2
A2-09	BWZ-51	146	Soil	0-2"	06/22/99 1205 hrs	Total PCBs	Area A2

**TABLE 1 (cont'd.) Floodplain Soil/Sediment Sample Description and Analysis**

Cornell-Dubilier Electronics

South Plainfield, NJ

21 - 23 June 1999

Field Sample ID	CLP Sample No.	Tag No.	Matrix	Depth	Date/Time	Analysis	Location *
A2-10	BWZ-52	147	Soil	0-2"	06/22/99 1200 hrs	Total PCBs	Area A2
A2-11	BWZ-53	148	Soil	0-2"	06/22/99 1150 hrs	Total PCBs	Area A2
A2-12	BWZ-54	149	Soil	0-2"	06/22/99 1155 hrs	Total PCBs	Duplicate of A2-11
A2-13	BWZ-55	150	Soil	0-2"	06/22/99 1146 hrs	Total PCBs	Area A2
A2-14	BWZ-56	151	Soil	0-2"	06/22/99 1140 hrs	Total PCBs	Area A2
A2-15	BWZ-57	152	Soil	0-2"	06/22/99 1145 hrs	Total PCBs	Area A2
A2-16	BWZ-58	153	Soil	0-2"	06/22/99 1135 hrs	Total PCBs	Area A2
A2-17	BWZ-59	154	Soil	0-2"	06/22/99 1140 hrs	Total PCBs	Area A2

**TABLE 1 (cont'd.) Floodplain Soil/Sediment Sample Description and Analysis**  
 Cornell-Dubilier Electronics  
 South Plainfield, NJ  
 21 - 23 June 1999

Field Sample ID	CLP Sample No.	Tag No.	Matrix	Depth	Date/Time	Analysis	Location *
A2-18	BWZ-60	155	Sediment	0-2"	06/22/99 1135 hrs	Total PCBs	Area A2
A2-19	BWZ-61	156	Sediment	0-2"	06/22/99 1155 hrs	Total PCBs	Area A2
A2-20	BWZ-62	157	Sediment	0-2"	06/22/99 1210 hrs	Total PCBs	Area A2
A2-21	BWZ-63	158	Sediment	0-2"	06/22/99 1215 hrs	Total PCBs	Area A2
A3-01	BWZ-64	159	Soil	0-2"	06/23/99 1110 hrs	Total PCBs	Area A3
A3-02	BWZ-65	160	Soil	0-2"	06/23/99 1115 hrs	Total PCBs	Duplicate of A3-01
A3-03	BWZ-66	161	Soil	0-2"	06/23/99 1120 hrs	Total PCBs	Area A3
A3-04	BWZ-67	162	Soil	0-2"	06/23/99 1120 hrs	Total PCBs	Area A3 MS/MSD

**TABLE 1 (cont'd.) Floodplain Soil/Sediment Sample Description and Analysis**  
 Cornell-Dubilier Electronics  
 South Plainfield, NJ  
 21 - 23 June 1999

Field Sample ID	CLP Sample No.	Tag No.	Matrix	Depth	Date/Time	Analysis	Location *
A3-05	BWZ-68	163	Soil	0-2"	06/23/99 1125 hrs	Total PCBs	Area A3
A3-06	BWZ-69	164	Soil	0-2"	06/23/99 1130 hrs	Total PCBs	Area A3
A3-07	BWZ-70	165	Soil	0-2"	06/23/99 1135 hrs	Total PCBs	Area A3
A3-08	BWZ-71	166	Soil	0-2"	06/23/99 1140 hrs	Total PCBs	Area A3
A3-09	BWZ-72	167	Soil	0-2"	06/23/99 1140 hrs	Total PCBs	Area A3
A3-10	BWZ-73	168	Soil	0-2"	06/23/99 1142 hrs	Total PCBs	Area A3
A3-11	BWZ-74	169	Soil	0-2"	06/23/99 1142 hrs	Total PCBs	Area A3
A3-12	BWZ-75	170	Soil	0-2"	06/23/99 1146 hrs	Total PCBs	Area A3

**TABLE 1 (cont'd.) Floodplain Soil/Sediment Sample Description and Analysis**  
**Cornell-Dubilier Electronics**  
**South Plainfield, NJ**  
**21 - 23 June 1999**

Field Sample ID	CLP Sample No.	Tag No.	Matrix	Depth	Date/Time	Analysis	Location *
A3-13	BWZ-76	171	Soil	0-2"	06/23/99 1146 hrs	Total PCBs	Area A3
A3-14	BWZ-77	172	Soil	0-2"	06/23/99 1155 hrs	Total PCBs	Area A3
A3-15	BWZ-78	173	Soil	0-2"	06/23/99 1158 hrs	Total PCBs	Area A3
A3-16	BWZ-79	174	Soil	0-2"	06/23/99 1201 hrs	Total PCBs	Area A3
A3-17	BWZ-80	175	Soil	0-2"	06/23/99 1202 hrs	Total PCBs	Area A3
A3-18	BWZ-81	176	Soil	0-2"	06/23/99 1215 hrs	Total PCBs	Area A3
A3-19	BWZ-82	177	Soil	0-2"	06/23/99 1212 hrs	Total PCBs	Area A3
A3-20	BWZ-83	178	Soil	0-2"	06/23/99 1230 hrs	Total PCBs	Area A3

**TABLE 1 (cont'd.) Floodplain Soil/Sediment Sample Description and Analysis**

Cornell-Dubilier Electronics

South Plainfield, NJ

21 - 23 June 1999

Field Sample ID	CLP Sample No.	Tag No.	Matrix	Depth	Date/Time	Analysis	Location *
A3-21	BWZ-84	179	Soil	0-2"	06/23/99 1230 hrs	Total PCBs	Area A3 MS/MSD
A3-22	BWZ-85	180	Soil	0-2"	06/23/99 1245 hrs	Total PCBs	Area A3
A3-23	BWZ-86	181	Soil	0-2"	06/23/99 1255 hrs	Total PCBs	Area A3
A3-24	BWZ-87	182	Soil	0-2"	06/23/99 1250 hrs	Total PCBs	Duplicate of A3-23
A3-25	BWZ-88	183	Soil	0-2"	06/23/99 1300 hrs	Total PCBs	Area A3
A3-26	BWZ-89	184	Soil	0-2"	06/23/99 1300 hrs	Total PCBs	Area A3
A3-27	BWZ-90	185	Soil	0-2"	06/23/99 1305 hrs	Total PCBs	Area A3
A3-28	BWZ-91	186	Soil	0-2"	06/23/99 1305 hrs	Total PCBs	Area A3

\* Area A1 - Veteran's Memorial Park; Area A2 - North side of Cedar Brook, between Lowden and Oakmoor Avenues; Area A3 - North side of Bound Brook in the vicinity of Fred Allen Drive; and Area A4 - Adjacent to drainage swale, south of New Market Ave. and approximately 525 feet east of Highland Ave.

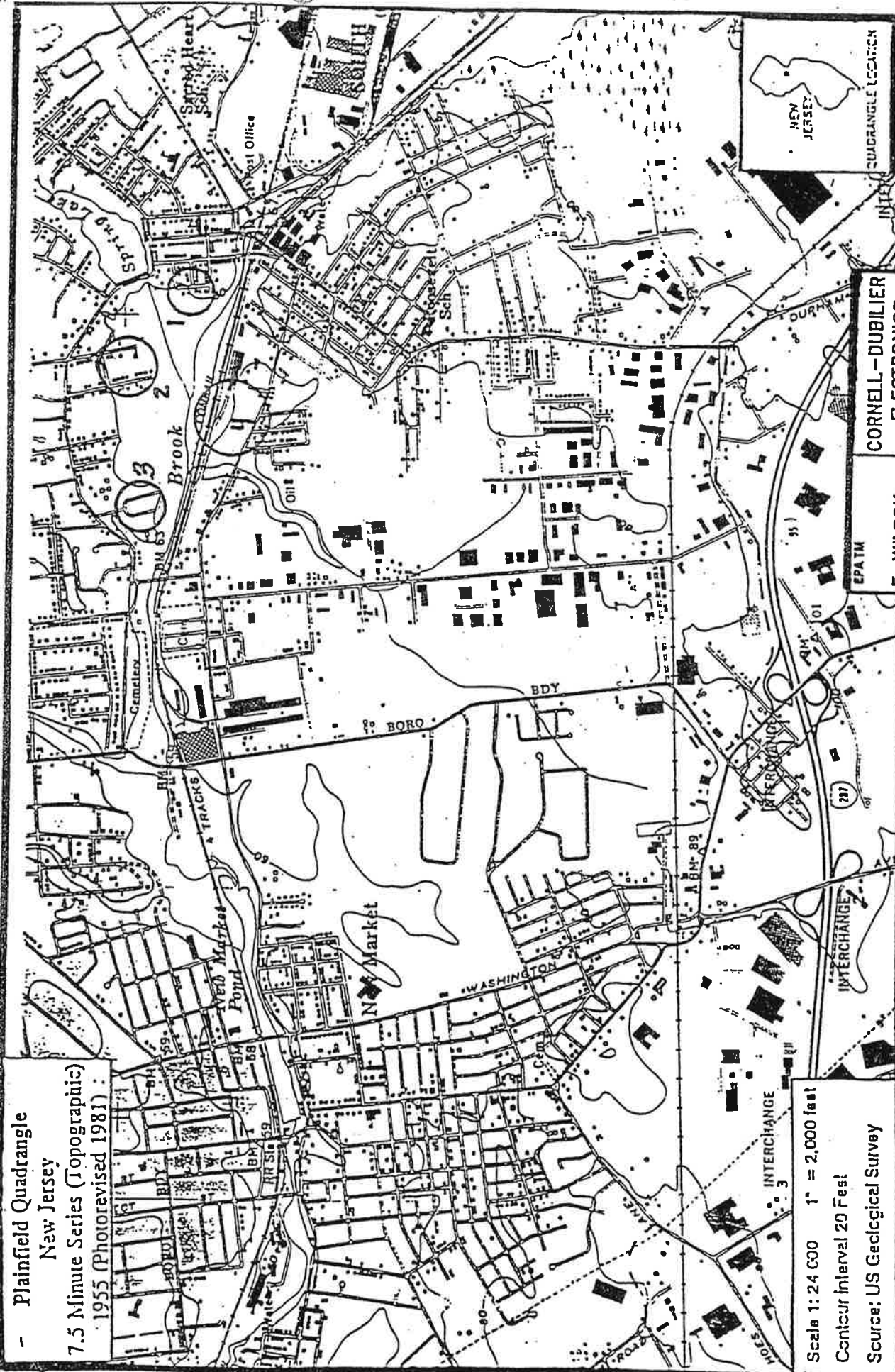
FIGURE 1

Location Plan  
Cornell-Dubilier Electronics  
South Plainfield, NJ



Plainfield Quadrangle  
New Jersey

7.5 Minute Series (Topographic)  
1955 (Photorevised 1981)



Scale 1:24,000 1" = 2,000 feet  
Contour Interval 20 Feet  
Source: US Geological Survey

**WESTON**  
MANAGEMENT OF ENVIRONMENTAL FACTORS

Roy F. Weston, Inc.  
FEDERAL PROGRAMS DIVISION

IN ASSOCIATION WITH RESOURCE APPLICATION, Inc.  
C.C. JOHNSON & MALHOTRA, P.C., ILE, SARRIERA ASSOCIATES,  
PHC ENVIRONMENTAL MANAGEMENT, AND GRB ENVIRONMENTAL SERVICES, INC.

CORNELL-DUBILIER  
ELECTRONICS  
S. PLAINFIELD, NJ

E. WILSON

START PM

M. MAHNKOPF

FIGURE 1  
SITE LOCATION  
MAP



NEW JERSEY  
QUADRANGLE LOCATION

**APPENDIX A**

**Organic Traffic Reports & Chain of Custody Records  
Cornell-Dubilier Electronics  
South Plainfield, NJ  
21 - 23 June 1999**







Case No. 0

2713B



1. Project Code	Account Code	2. Region No.	Sampling Co.	4. Date Shipped	Carrier	6. Matrix (Enter in Column A)	7. Preservative (Enter in Column D)
Regional Information	NJD 981557879	2	WESTERN STATE	6/2/99	FEDEX	1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify in Column A)	1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. Other (Specify in Column D) N. Not preserved
Non-Superfund Program							
Site Name	Canoe - Oakleaf						
City, State	Spanaway, NJ						
Site Split ID	GZ						
Matrix (from Box 6)	Low Med High	Matrix Preservative	Sample Type	Conc.	Matrix	Sample	Sample
Sample Num (from Box 6)	1	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	2	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	3	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	4	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	5	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	6	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	7	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	8	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	9	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	10	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	11	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	12	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	13	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	14	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	15	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	16	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	17	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	18	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	19	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	20	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	21	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	22	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	23	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	24	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	25	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	26	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	27	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	28	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	29	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	30	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	31	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	32	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	33	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	34	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	35	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	36	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	37	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	38	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	39	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	40	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	41	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	42	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	43	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	44	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	45	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	46	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	47	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	48	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	49	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	50	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	51	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	52	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	53	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	54	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	55	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	56	Sample Type	Conc.	Matrix	Sample	Sample	Sample
Sample Num (from Box 6)	57	Sample Type	Conc.	Matrix	Sample		

CHAIN OF CUSTODY RECORD							
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time
<i>[Signature]</i>	6/21/99 1630						
<i>[Signature]</i>							
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EPA Form 9110-2

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SEE REVERSE FOR PURPOSE CODE DEFINITIONS



United States Environmental Protection Agency  
Contract Laboratory Program

# Organic Traffic Report & Chain of Custody Record (For Organic CLP Analysis)

Case No.

27133

1. Project Code		Account Code		2. Region No. Sampling Co.		4. Date Shipped		Carrier		6. Matrix (Enter in Column A)		7. Preservative (Enter in Column D)	
NJ D 98155 7879				2 WEST STATE		0-21-99		FEO EX		1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify in Column A)		1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. Other (Specify in Column D) N. Not preserved	
Regional Information		Sampler (Name)		Altrill Number		802546321349							
Non-Superfund Program		Sample Signature		5. Ship To		SOUTHWEST CAS OF OKLA HUNT							
Site Name		Site Spill ID		3. Purpose		Early Action		Long-Term Action					
Circumstances - DANGER		G-2		X SFM X PRP X ST X FED		CLEM PAMS REM RA O&M NPLD		FES RD RA O&M NPLD					
City/State		Sample Pres.		R/S Analysis		Regional Specific		Tracking Numbers		H Mo/Day/Year/Time		J K	
SPRINGFIELD, NJ		Low (from Box 7)		X TOX		1-2-1		A1-21		6/24/99 1015		N/A	
Sample Numbers (from label)		Conc. Low (from Box 7)		X TOX		1-2-2		A1-22		1020			
182-226		High (from Box 7)		X TOX		1-2-3		A1-23		1025			
302-227		Direct (from Box 7)		X TOX		1-2-4		A1-24		1130			
302-228				X TOX		1-2-5		A1-25		1020			
302-229				X TOX		1-2-6		A1-26		1022			
302-230				X TOX		1-2-7		A1-27		1025			
302-231				X TOX		1-2-8		A1-28		1045			
302-232				X TOX		1-2-9		A1-29		1040			
302-233				X TOX		1-30		A1-30		1035			
302-234				X TOX									
302-235				X TOX									
302-236				X TOX									
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302-396				X TOX									





United States Environmental Protection Agency  
Contract Laboratory Program

# Organic Traffic Report & Chain of Custody Record (For Organic CLP Analysis)



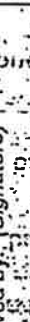
**Case No.**

6615-4

27133

[illegible]

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	6/2/09/630				
					
					
					
					

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A21-012-15 REV.



United States Environmental Protection Agency  
Contract Laboratory Program

**Organic Traffic Report**  
**Chain of Custody Record**  
**:( For Organic C/P Analysis)**

**Case No.**

2.7133

6. Matrix  
(Enter In Column A)

1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. Oil (High only)
7. Waste (High only)
8. Other. (Specify In Column A)

7. Preservative  
(Enter In Column D)

1. HCl
2. HNO<sub>3</sub>
3. NaHSO<sub>4</sub>
4. H<sub>2</sub>SO<sub>4</sub>
5. Ice only
6. Other (Specify In Column D)
- N. Not preserved

Shipped Carrier  
99-08-27 E

Imbe  
25463-1344

TO  
MINNETONCA  
WAT  
PARKWAY  
MCKEN AGG  
(918) 251-0544  
HACKBORD

2. Region No. Sampling Co.	2	W3560	5177
Sampler (Name)	J. Brenner		
Sampler Signature			
3. Purpose	Early Action 1	Long-Term Action	
Lead	5	5	5
FSF	5	CLEM	FS
PRP	5	PA	FD
ST	5	REM	RA
FED	5	RI	O&M
	5	SL	NPLD
	5	ES	

Project Code	Account Code
Regional Information	
Non-Superfund Program	ID
Site Name	Site Spill ID
City/State	Date

CLP Sample Number (from label)	Matrix (from Box 6)	Conc. Low Med High	Sample Type: Comp. Grab	Valve (from Box 7)	RAS Analysis		Tracking Numbers	Station Location Identifier	Mo/Day/Year/Time Sample Collection	Corresponding CLP Inorganic Sample No.	Sampler Initials	Field QC Qualifier B = Back - S = Spike D = Duplicate R = Retest PE = Percent Error N/A = Not a QC Sample
					VOA	High only ARO/TOX						
BXA-190	✓	✓	✓	✓	✓	✓	1910	AX-01	6/21/99 1400	N/A	JD	
BXA-191	✓	✓	✓	✓	✓	✓	1911	AX-02	1402			
BXA-192	✓	✓	✓	✓	✓	✓	1913	AX-03	1402			
BXA-193	✓	✓	✓	✓	✓	✓	1914	AX-04	1406			
BXA-194	✓	✓	✓	✓	✓	✓	1915	AX-05	1412			
BXA-195	✓	✓	✓	✓	✓	✓	1916	AX-06	1416			
BXA-196	✓	✓	✓	✓	✓	✓	1917	AX-07	1430			
BXA-197	✓	✓	✓	✓	✓	✓	1918	AX-08	1436			
BXA-198	✓	✓	✓	✓	✓	✓	1919	AX-09	1438			
BXA-199	✓	✓	✓	✓	✓	✓	2000	AX-10	1430	✓	✓	AS/ASD

Shipment for Case #

Complete? (Y/N)



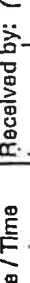



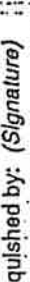


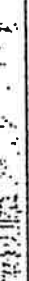
Page 1 of 3

Sample(s) to be Used for Laboratory QC: BXA-05 (AS/ASD)

Additional Sampler Signatures

Chain of Custody Seal Number(s)

**CHAIN OF CUSTODY: RECORD**

Relinquished by: (Signature) 	Date / Time 11/1/92 1:00	Received by: (Signature) 	Relinquished by: (Signature) 	Date / Time	Received by: (Signature) 
Relinquished by: (Signature) 	Date / Time	Received by: (Signature) 	Relinquished by: (Signature) 	Date / Time	Received by: (Signature) 
Relinquished by: (Signature) 	Date / Time	Received for Laboratory by: (Signature) 	Remarks		Is custody seal intact? Y/N/None

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EPA Form 9110-2  
Rev. 12-19-91






# Organic Traffic Report & Chain of Custody Record (For Organic CLP Analysis)

**Case No.**

27133

1. Project Code	Account Code	2. Region No.	Sampling Co.	4. Date Shipped	Carrier	6. Matrix (Enter in Column A)	7. Preservative (Enter in Column D)				
Regional Information		2	Western Slope	6-21-99	Red Ex	1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify in Column A)	1. HCl 2. HNO <sub>3</sub> 3. NaHSO <sub>4</sub> 4. H <sub>2</sub> SO <sub>4</sub> 5. Ice only 6. Other (Specify in Column D) N. Not preserved				
Non-Superfund Program				Albill Number							
Site Name				5. Ship To							
City, State				ATTN: HARRY KOLG							
CLP Sample Numbers (from labels)	A Matrix (from Box 6)	B Conc: Low Med High	C Sample Type: Comp. Grab	D Preservative (from Box 7)	E RAS Analysis: VOX BNA High only APO/TOX	F Regional Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier B = Blank S = Spike D = Duplicate R = Retest PE = Perform Eval. - = Not a QC Sample
BXA-06	5	1/2	G	5	X	201	AY-11	6/21/99 1426	N/A	TB	
BXA-07	1	1	1	1	1	202	AY-12	1426			
BXA-08	1	1	1	1	1	203	AY-13	1426			
BXA-09	1	1	1	1	1	204	AY-14	1440			
BXA-10	1	1	1	1	1	205	AY-15	1440			
BXA-11	1	1	1	1	1	206	AY-16	1434			
BXA-12	1	1	1	1	1	207	AY-17	1430			
BXA-13	1	1	1	1	1	208	AY-18	1424			
BXA-14	1	1	1	1	1	209	AY-19	1422			
BXA-15	1	1	1	1	1	210	AY-20	1400			
Shipment for Case Complete? (Y/N)											
Page	2 of 2	Sample(s) to be Used for Laboratory QC	Additional Sampler Signatures	Chain of Custody Seal Number(s)							

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature) 	Date / Time 6/21/99 / 1700	Received by: (Signature)	Date / Time	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature) 	Date / Time	Received by: (Signature)	Date / Time	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature) 	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Date / Time	Is custody seal intact? Y/N/none

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DEFINITIONS  
CC7207

REV. 012-15





United States Environmental Protection Agency  
Contract Laboratory Program

# Organic Toxic Report & Chain of Custody Record (For Organic CLP Analysis)

Case No.

27133

1. Project Code 981557879		2. Region No. 2		3. Sampling Code W-21-330		4. Date Shipped 02/21/98		5. Carrier Fed Ex		6. Matrix (Enter in Column A) 1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify in Column A)		7. Preservation (Enter in Column D) 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. None only 6. Other (Specify in Column D) N. Not preserved									
Regional Information NLD 981557879		Sampler (Name) J. Sigala		Airbill Number 802353633434		Ship to Superior Technology, Inc. 12000 1st Ave. San Diego, CA 92121		Sample Signature J. Sigala		Sample Purpose B. Benthic C. Benthic D. Benthic E. Benthic F. Benthic G. Benthic H. Benthic I. Benthic J. Benthic K. Benthic L. Benthic M. Benthic N. Benthic O. Benthic P. Benthic Q. Benthic R. Benthic S. Benthic T. Benthic U. Benthic V. Benthic W. Benthic X. Benthic Y. Benthic Z. Benthic		Sample Station Location Identifier 21-330		Date / Time 02/21/98 1440		Corresponding CLP Inorganic Sample No. N/A		Sampler Initials JBS		Field QC Qualifier 1. Blank 2. Back 3. Batcher 4. Duplicates 5. Field QC 6. Performance 7. Preserved 8. Not a QC Sample	
Non-Superfund Program		Sample Signature J. Sigala		Regional Specific Tracking Number 21-330		Regional Specific Tracking Number 21-330		Regional Specific Tracking Number 21-330		Regional Specific Tracking Number 21-330		Regional Specific Tracking Number 21-330		Regional Specific Tracking Number 21-330		Regional Specific Tracking Number 21-330		Regional Specific Tracking Number 21-330		Regional Specific Tracking Number 21-330	
Site Name Com 11 - DONALD		Site Split ID G2		Sample Preservation D		Sample Type Med		Sample Concentration 4m		Sample Matrix 58		Sample Matrix 58		Sample Matrix 58		Sample Matrix 58		Sample Matrix 58		Sample Matrix 58	
City/State San Diego, CA		Sample Numbers 1 (from Labels)		Sample Numbers 1 (from Labels)		Sample Numbers 1 (from Labels)		Sample Numbers 1 (from Labels)		Sample Numbers 1 (from Labels)		Sample Numbers 1 (from Labels)		Sample Numbers 1 (from Labels)		Sample Numbers 1 (from Labels)		Sample Numbers 1 (from Labels)		Sample Numbers 1 (from Labels)	
Shipment of Case Complete? (Y/N) Y		Page 3 of 3		Sample(s) to be Used for Laboratory QC None		Additional Sampler Signatures		Chain of Custody Seal Number(s) 1553		Chain of Custody Seal Number(s) 1553		Chain of Custody Seal Number(s) 1553		Chain of Custody Seal Number(s) 1553		Chain of Custody Seal Number(s) 1553		Chain of Custody Seal Number(s) 1553		Chain of Custody Seal Number(s) 1553	

Relinquished by: (Signature) J. Sigala		Date / Time 02/21/98 1700		Received by: (Signature) J. Sigala		Date / Time 02/21/98 1700		Relinquished by: (Signature) J. Sigala		Date / Time 02/21/98 1700		Received by: (Signature) J. Sigala		Date / Time 02/21/98 1700		Relinquished by: (Signature) J. Sigala		Date / Time 02/21/98 1700		Received by: (Signature) J. Sigala		Date / Time 02/21/98 1700	
Relinquished by: (Signature) J. Sigala		Date / Time 02/21/98 1700		Received by: (Signature) J. Sigala		Date / Time 02/21/98 1700		Relinquished by: (Signature) J. Sigala		Date / Time 02/21/98 1700		Received by: (Signature) J. Sigala		Date / Time 02/21/98 1700		Relinquished by: (Signature) J. Sigala		Date / Time 02/21/98 1700		Received by: (Signature) J. Sigala		Date / Time 02/21/98 1700	
Relinquished by: (Signature) J. Sigala		Date / Time 02/21/98 1700		Received by: (Signature) J. Sigala		Date / Time 02/21/98 1700		Relinquished by: (Signature) J. Sigala		Date / Time 02/21/98 1700		Received by: (Signature) J. Sigala		Date / Time 02/21/98 1700		Relinquished by: (Signature) J. Sigala		Date / Time 02/21/98 1700		Received by: (Signature) J. Sigala		Date / Time 02/21/98 1700	

Remarks: Is custody seal intact? Y/N/none



United States Environmental Protection Agency  
Contract Laboratory Program

**Organic Traffic Report**  
**Chain of Custody Record**  
(For Organic CLP Analysis)

CARRA-NO.

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[illegible]

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United States Environmental Protection Agency  
Contract Laboratory Program

# Organic Traffic Report & Chain of Custody Record (For Organic CLP Analysis)

Case No.

27133

1. Project Code	Account Code	2. Region No.	Sampling Co.	4. Date Shipped	Carrier	6. Matrix (Enter in Column A)	7. Preservative (Enter in Column D)
Regional Information		2	Westchester	6-22-99	Ed. Et	1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify in Column A)	1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. Other N. Not preserved
Non-Superfund Program				Airbill Number			
				810158220925			
Site Name		3. Purpose	Early Action	5. Ship To			
Cornell-Duquenois		Lead	CLEM	Southwest Labs of Oklahoma			
City, State	Site Spill ID	FS	PA	1700 West Highway 55, Suite C			
SAN ANTONIO, TX	G-2	PRP	REM	Broken Machine, Box 2402			
		ST	RI	(1918) 251-0545			
		FED	ESI	ATTN: Handy Tech			

A	B	C	D	E	F	G	H	I	J	K
CLP Sample Numbers (from Box 6) (Other: )	Matrix Conc. Low Med High	Sample Type: Comp. Grab	Preservative (from Box 7) (Other: )	RAS Analysis: BNA TOX	Regional Specific Tracking Number or Tag Numbers	Station Location Identifier	Mo/Day/Year Sample Collection	Corresponding CLP Inorganic Sample No.	Sampler Initials	Field QC Qualifier
BW2-53	5	4m	G-5	X	148	AZ-11	6/22/99	N/A	JTB	
BW2-54					149	AZ-12	1155			
BW2-55					150	AZ-13	1146			
BW2-56					151	AZ-14	1140			
BW2-57					152	AZ-15	1145			
BW2-58					153	AZ-16	1135			
BW2-59					154	AZ-17	1140			
BW2-60					155	AZ-18	1135			
BW2-61					156	AZ-19	1155			
BW2-62					157	AZ-20	1210			
Shipment for Case Complete? (Y/N)	Page 2 of 3	Sample(s) to be Used for Laboratory QC	Additional Sampler Signatures	Chain of Custody Seal Number(s)						

## CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time
<i>[Signature]</i>	6/22/99 1530		
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time

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AZ1-012-15 REV



United States Environmental Protection Agency  
Contract Laboratory Program

Organic Traffic Report  
& Chain of Custody Record  
(For Organic CLP Analysis)

Case No.

27133

1. Project Code 148		2. Region No. 02		3. Sampling Co. Western State		4. Date Shipped 6-22-99		5. Carrier EX		6. Matrix (Enter in Column A) 1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify in Column A)		7. Preservative (Enter in Column D) 1. HCl 2. HNO <sub>3</sub> 3. NaHSO <sub>4</sub> 4. H <sub>2</sub> SO <sub>4</sub> 5. Ice only 6. Other (Specify in Column D) N. Not preserved											
Regional Information NDO 981557879		Sampler (Name) J. Brennan		Airbill Number 810158220925		5. Ship To Spartan 1905 OF O'CONNOR 1700 West Hickory, Suite C Broken Arrow, OK 74012 ATTN: HARRY BOYD		H Mo/Day/Year 6/22/99 1215		I Corresponding CLP Inorganic Sample No. N/A		J Sampler Initials JTB		K Field QC Qualifier B = Blank, S = Spike D = Duplicate R = Retest PE = Perform Eval. N = Not a QC Sample									
Non-Superfund Program		3. Purpose SF PRP ST FED		Early Action CLEM PA REM RI SI ESI		Long-Term Action IFS RD RA O&M INPLD		F Regional Specific Tracking Number or Tag Numbers 158		G Station Location Identifier A2-21		H Mo/Day/Year 6/22/99 1215		I Corresponding CLP Inorganic Sample No. N/A		J Sampler Initials JTB		K Field QC Qualifier B = Blank, S = Spike D = Duplicate R = Retest PE = Perform Eval. N = Not a QC Sample					
Site Name Cornell-Dubier		City/State Spartan, W		Site Spill ID GZ		D Preservative (from Box 7) Other		E RAS Analysis VOA BNA High only ARO/ TOX		F Regional Specific Tracking Number or Tag Numbers 158		G Station Location Identifier A2-21		H Mo/Day/Year 6/22/99 1215		I Corresponding CLP Inorganic Sample No. N/A		J Sampler Initials JTB		K Field QC Qualifier B = Blank, S = Spike D = Duplicate R = Retest PE = Perform Eval. N = Not a QC Sample			
CLP Sample Numbers (from labels)		A Matrix (from Box 6) Other		B Conc. Low Med High		C Sample Type (from Grab Box 7) Other		D Preservative (from Box 7) Other		E RAS Analysis VOA BNA High only ARO/ TOX		F Regional Specific Tracking Number or Tag Numbers 158		G Station Location Identifier A2-21		H Mo/Day/Year 6/22/99 1215		I Corresponding CLP Inorganic Sample No. N/A		J Sampler Initials JTB		K Field QC Qualifier B = Blank, S = Spike D = Duplicate R = Retest PE = Perform Eval. N = Not a QC Sample	
Shipment for Case Complete? (Y/N)		Page 3 of 3		Sample(s) to be Used for Laboratory QC None		Additional Sampler Signatures		Chain of Custody Seal Number(s)															

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature) J. Brennan	Date / Time 6/22/99 1530	Received by: (Signature)	Date / Time	Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Is custody seal intact? Y/N/none	Date / Time	Remarks	Date / Time

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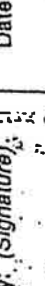
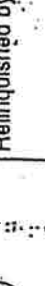
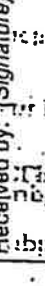
## Organic Traffic Report & Chain of Custody Record (For Organic.CLP Analysis)

Case No.

## • Chain of Custody Record (For Organic.CLP Analysis)

27133

1. Project Code		Account Code		2. Region No., Sampling Co.		4. Date Shipped		Carrier		6. Matrix (Enter in Column A)		7. Preservative (Enter in Column D)	
Regional Information		Sampler (Name)		Airbill Number		Ship To		Station Location Identifier		Corresponding CLP Inorganic Sample No.		Sampler Initials	
Non-Superfund Program		J. BRENNAN		623-99		Secton of Engrs of area		A3-01		N/A		JB	
Site Name		Cornell Dublier		J. BRENNAN		Secton of Engrs of area		A3-02					
City, State		Site Split ID		J. BRENNAN		Secton of Engrs of area		A3-03					
S. ADVANCE, NY		G-2		J. BRENNAN		Secton of Engrs of area		A3-04					
A		B		C		D		E		F		G	
Matrix (from Box 6)		Conc. Low Med High		Sample Type: Comp. Grab		Preservative (from Box 7)		Regional Specific Tracking Number or Tag Numbers		Mo/Day/Year/Time Sample Collection		Field QC Qualifier	
CLP Sample Numbers (from labels)		Low Med High		Type: Comp. Grab		Valve (from Box 7)		159 160 161 162 163 164 165 166 167 168		1110 1115 1120 1125 1130 1135 1140 1142		8-BW-4, 5-BW-6, 6-BW-7, 7-BW-8, 8-BW-9, 9-BW-10, 10-BW-11, 11-BW-12, 12-BW-13, 13-BW-14, 14-BW-15, 15-BW-16, 16-BW-17, 17-BW-18, 18-BW-19, 19-BW-20, 20-BW-21, 21-BW-22, 22-BW-23, 23-BW-24, 24-BW-25, 25-BW-26, 26-BW-27, 27-BW-28, 28-BW-29, 29-BW-30, 30-BW-31, 31-BW-32, 32-BW-33, 33-BW-34, 34-BW-35, 35-BW-36, 36-BW-37, 37-BW-38, 38-BW-39, 39-BW-40, 40-BW-41, 41-BW-42, 42-BW-43, 43-BW-44, 44-BW-45, 45-BW-46, 46-BW-47, 47-BW-48, 48-BW-49, 49-BW-50, 50-BW-51, 51-BW-52, 52-BW-53, 53-BW-54, 54-BW-55, 55-BW-56, 56-BW-57, 57-BW-58, 58-BW-59, 59-BW-60, 60-BW-61, 61-BW-62, 62-BW-63, 63-BW-64, 64-BW-65, 65-BW-66, 66-BW-67, 67-BW-68, 68-BW-69, 69-BW-70, 70-BW-71, 71-BW-72, 72-BW-73, 73-BW-74, 74-BW-75, 75-BW-76, 76-BW-77, 77-BW-78, 78-BW-79, 79-BW-80, 80-BW-81, 81-BW-82, 82-BW-83, 83-BW-84, 84-BW-85, 85-BW-86, 86-BW-87, 87-BW-88, 88-BW-89, 89-BW-90, 90-BW-91, 91-BW-92, 92-BW-93, 93-BW-94, 94-BW-95, 95-BW-96, 96-BW-97, 97-BW-98, 98-BW-99, 99-BW-100, 100-BW-101, 101-BW-102, 102-BW-103, 103-BW-104, 104-BW-105, 105-BW-106, 106-BW-107, 107-BW-108, 108-BW-109, 109-BW-110, 110-BW-111, 111-BW-112, 112-BW-113, 113-BW-114, 114-BW-115, 115-BW-116, 116-BW-117, 117-BW-118, 118-BW-119, 119-BW-120, 120-BW-121, 121-BW-122, 122-BW-123, 123-BW-124, 124-BW-125, 125-BW-126, 126-BW-127, 127-BW-128, 128-BW-129, 129-BW-130, 130-BW-131, 131-BW-132, 132-BW-133, 133-BW-134, 134-BW-135, 135-BW-136, 136-BW-137, 137-BW-138, 138-BW-139, 139-BW-140, 140-BW-141, 141-BW-142, 142-BW-143, 143-BW-144, 144-BW-145, 145-BW-146, 146-BW-147, 147-BW-148, 148-BW-149, 149-BW-150, 150-BW-151, 151-BW-152, 152-BW-153, 153-BW-154, 154-BW-155, 155-BW-156, 156-BW-157, 157-BW-158, 158-BW-159, 159-BW-160, 160-BW-161, 161-BW-162, 162-BW-163, 163-BW-164, 164-BW-165, 165-BW-166, 166-BW-167, 167-BW-168, 168-BW-169, 169-BW-170, 170-BW-171, 171-BW-172, 172-BW-173, 173-BW-174, 174-BW-175, 175-BW-176, 176-BW-177, 177-BW-178, 178-BW-179, 179-BW-180, 180-BW-181, 181-BW-182, 182-BW-183, 183-BW-184, 184-BW-185, 185-BW-186, 186-BW-187, 187-BW-188, 188-BW-189, 189-BW-190, 190-BW-191, 191-BW-192, 192-BW-193, 193-BW-194, 194-BW-195, 195-BW-196, 196-BW-197, 197-BW-198, 198-BW-199, 199-BW-200, 200-BW-201, 201-BW-202, 202-BW-203, 203-BW-204, 204-BW-205, 205-BW-206, 206-BW-207, 207-BW-208, 208-BW-209, 209-BW-210, 210-BW-211, 211-BW-212, 212-BW-213, 213-BW-214, 214-BW-215, 215-BW-216, 216-BW-217, 217-BW-218, 218-BW-219, 219-BW-220, 220-BW-221, 221-BW-222, 222-BW-223, 223-BW-224, 224-BW-225, 225-BW-226, 226-BW-227, 227-BW-228, 228-BW-229, 229-BW-230, 230-BW-231, 231-BW-232, 232-BW-233, 233-BW-234, 234-BW-235, 235-BW-236, 236-BW-237, 237-BW-238, 238-BW-239, 239-BW-240, 240-BW-241, 241-BW-242, 242-BW-243, 243-BW-244, 244-BW-245, 245-BW-246, 246-BW-247, 247-BW-248, 248-BW-249, 249-BW-250, 250-BW-251, 251-BW-252, 252-BW-253, 253-BW-254, 254-BW-255, 255-BW-256, 256-BW-257, 257-BW-258, 258-BW-259, 259-BW-260, 260-BW-261, 261-BW-262, 262-BW-263, 263-BW-264, 264-BW-265, 265-BW-266, 266-BW-267, 267-BW-268, 268-BW-269, 269-BW-270, 270-BW-271, 271-BW-272, 272-BW-273, 273-BW-274, 274-BW-275, 275-BW-276, 276-BW-277, 277-BW-278, 278-BW-279, 279-BW-280, 280-BW-281, 281-BW-282, 282-BW-283, 283-BW-284, 284-BW-285, 285-BW-286, 286-BW-287, 287-BW-288, 288-BW-289, 289-BW-290, 290-BW-291, 291-BW-292, 292-BW-293, 293-BW-294, 294-BW-295, 295-BW-296, 296-BW-297, 297-BW-298, 298-BW-299, 299-BW-300, 300-BW-301, 301-BW-302, 302-BW-303, 303-BW-304, 304-BW-305, 305-BW-306, 306-BW-307, 307-BW-308, 308-BW	

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	6/27/15						
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)		Remarks - Is custody seal intact? Y/N/none			

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United States Environmental Protection Agency  
Contract Laboratory Program

# Organic Traffic Report & Chain of Custody Record (For Organic CLP Analysis)

Case No.

27133

1. Project Code	Account Code	2. Region No.	Sampling Co.	4. Date Shipped	Carrier
		2	Wilson State	6-23-79	Ex
Regional Information		Sampler (Name)	Airbill Number		
NJD 981557879		J. Brennan	810158220936		
Non-Superfund Program		Sampler Signature	5. Ship To		
		[Signature]	SOUTHWEST LABS OF OKLAHOMA		
Site Name		3. Purpose	Long-Term Location		
Cornell-Daniel		Lead <input checked="" type="checkbox"/> Early Action <input type="checkbox"/>	PAI <input type="checkbox"/> FS <input type="checkbox"/> RD <input type="checkbox"/> RA <input type="checkbox"/> O&M <input type="checkbox"/> NPLD <input type="checkbox"/>		
City, State		Lead <input checked="" type="checkbox"/> ST <input type="checkbox"/> IFED <input type="checkbox"/>	Regional Specific Tracking Number or Tag Numbers		
Stamford, NJ			699		
CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other	B Conc. Low Med High	C Sample Type: (from Box 7) Other	D Preservative (from Box 8) Other	E RAS Analysis: BNA <input checked="" type="checkbox"/> ARO <input type="checkbox"/> TOX <input type="checkbox"/>
BWZ-74	5	4m G	35		X
BWZ-75					
BWZ-76					
BWZ-77					
BWZ-78					
BWZ-79					
BWZ-80					
BWZ-81					
BWZ-82					
BWZ-83					
Shipment for Case Complete? (ON)	Page 2 of 3	Sample(s) to be Used for Laboratory QC			
		None			

6. Matrix (Enter in Column A)	7. Preservative (Enter in Column D)	8. Chain of Custody Seal Number(s)
1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify in Column A)	1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. Other (Specify in Column D) N. Not preserved	
Corresponding CLP Inorganic Sample No.	Sampler Initials	K Field QC Qualifier
N/A	JB	8. Bulk 9. Seal B. Bulk 9. Seal PE = Perform Field = Not a QC Sample
Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[Signature]	12/31/79 1500	[Signature]
Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[Signature]	12/31/79 1500	[Signature]
Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[Signature]		[Signature]



United States Environmental Protection Agency  
Contract Laboratory Program

# Organic Traffic Report & Chain of Custody Record (For Organic CLP Analysis)

Case No.

27133

1. Project Code	Account Code	2. Region No.	Sampling Co.	4. Date Shipped	Carrier	6. Matrix (Enter in Column A)	7. Preservative (Enter in Column D)
Regional Information	UTD 981557 879	2	Western State	6-23-99	Ad Ex	1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify in Column A)	1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. Other (Specify in Column D) N. Not preserved
Non-Superfund Program		Sampler (Name)	J. Bianchi	Airbill Number	810158220936		
Site Name	Cornell - Dupont	Sampler Signature	[Signature]	5. Ship To	Summit Lakes of Oklahoma 1700 West Adams, Suite C Bartlesville, OK 74603 (405) 251-4455 ATTN: R. Adams		
City, State	S. Lawrence, MO	3. Purpose	Lead [X] SPT [ ] ST [ ] FED	Regional Specific Tracking Number or Tag Numbers	180		
Site Spill ID	G-2	Early Action	[X] CLEM [ ] REM [ ] RISO [ ] SSI [ ] ESI	Station Location Identifier	A3-21		
CLP Sample Numbers (from labels)		Preservation	[X] BNA [ ] TOX [ ] ARO [ ] TOX	Mo/Day/Year/Time Sample Collection	6/23/99 1230		
BWZ-84	5	Conc. Low Med High	5		12/19		
BWZ-85					12/15		
BWZ-86					12/15		
BWZ-87					12/15		
BWZ-88					12/15		
BWZ-89					12/15		
BWZ-90					12/15		
BWZ-91					12/15		
Shipment for Case Completed (N/N)	3 of 3	Sample(s) to be Used for Laboratory QC	BWZ-84 (MS/ASD)	Additional Sampler Signatures			
Relinquished by: (Signature)	[Signature]	Date / Time	6/23/99 1100	Received by: (Signature)	[Signature]	Date / Time	6/23/99 1100
Relinquished by: (Signature)	[Signature]	Date / Time		Received by: (Signature)	[Signature]	Date / Time	
Relinquished by: (Signature)	[Signature]	Date / Time		Received by: (Signature)	[Signature]	Date / Time	

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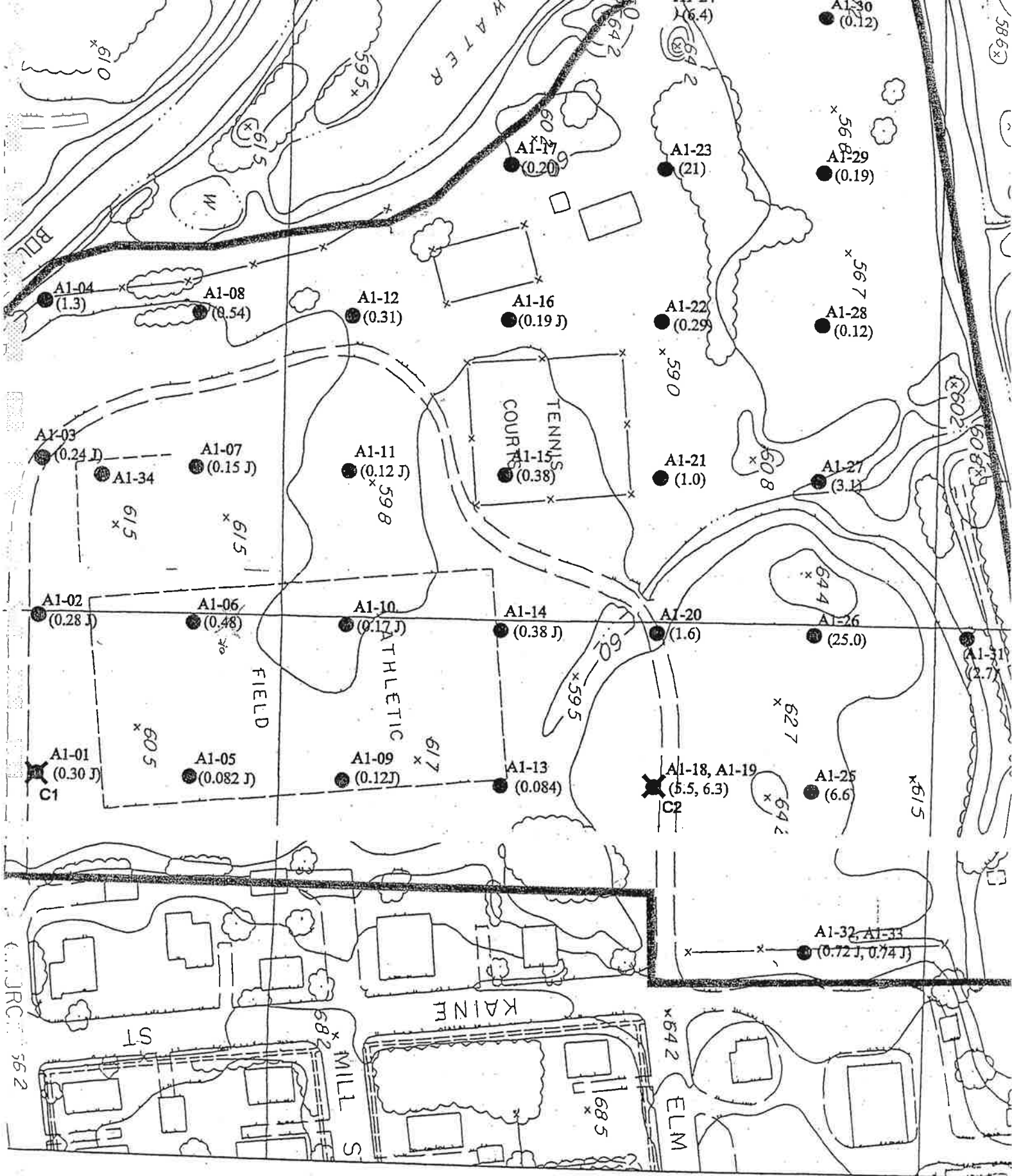
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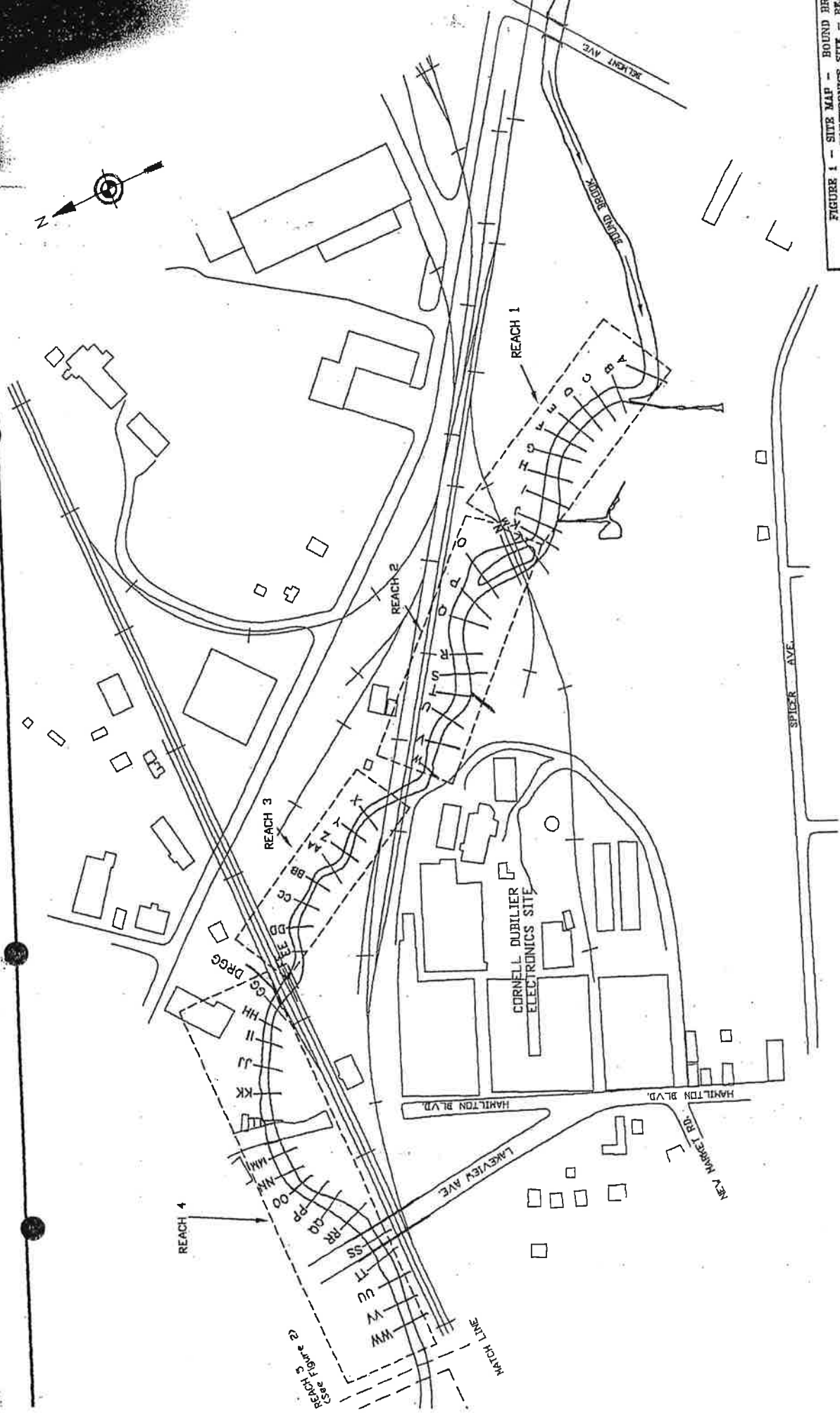
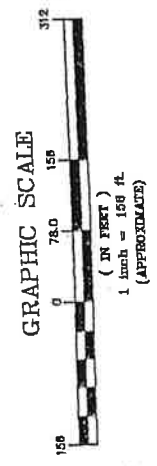
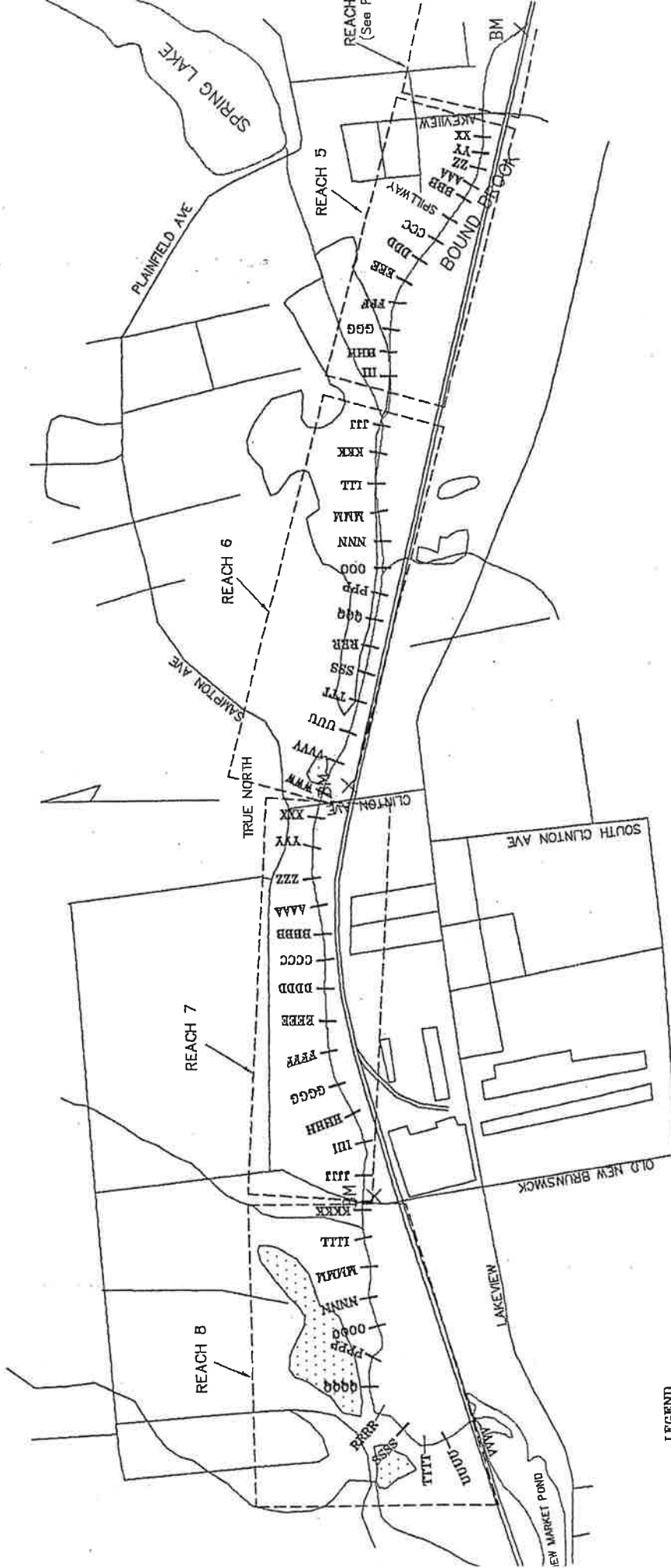


FIGURE 1 - SITE MAP - BOUND BROOK  
CORNELL DUBILIER ELECTRONICS SITE - REACH  
SOUTH PLAINFIELD, NEW JERSEY  
OCTOBER 1997  
US EPA REMOVAL ACTION BRANCH  
SUPERFUND TECHNICAL ASSESSMENT AND REMEDIAL TEAM  
CONTRACT # 68-MC-0018

EDITED BY: J. HAMPTON JR.  
EPA TASK MONITOR: D. HARWAY  
START PROJECT MANAGER: M. MAHNOFF

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FEDERAL PROGRAMS DIVISION  
IN ASSOCIATION WITH PRG ENVIRONMENTAL MANAGEMENT, INC.,  
C.C. JOHNSON & MALHOTRA P.C., RESOURCES APPLICATIONS, INC.,  
R.E. SARRERA ASSOCIATES, AND GIBB ENVIRONMENTAL SERVICES, INC.





LEGEND

- ROAD
- STREAM
- == RAILROAD



SCALE IN METERS

FIGURE 2 - SITE MAP - BOUND BROOK

CORNELL-DUBILIER ELECTRONICS - REACHES  
SOUTH PLAINFIELD, NEW JERSEY  
DECEMBER 1997

US EPA REMOVAL ACTION BRANCH  
SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM  
CONTRACT# 68-WF-0018

DRAWN BY: J. HAMPTON JR.

EPA TASK MONITOR: D. HARKAY

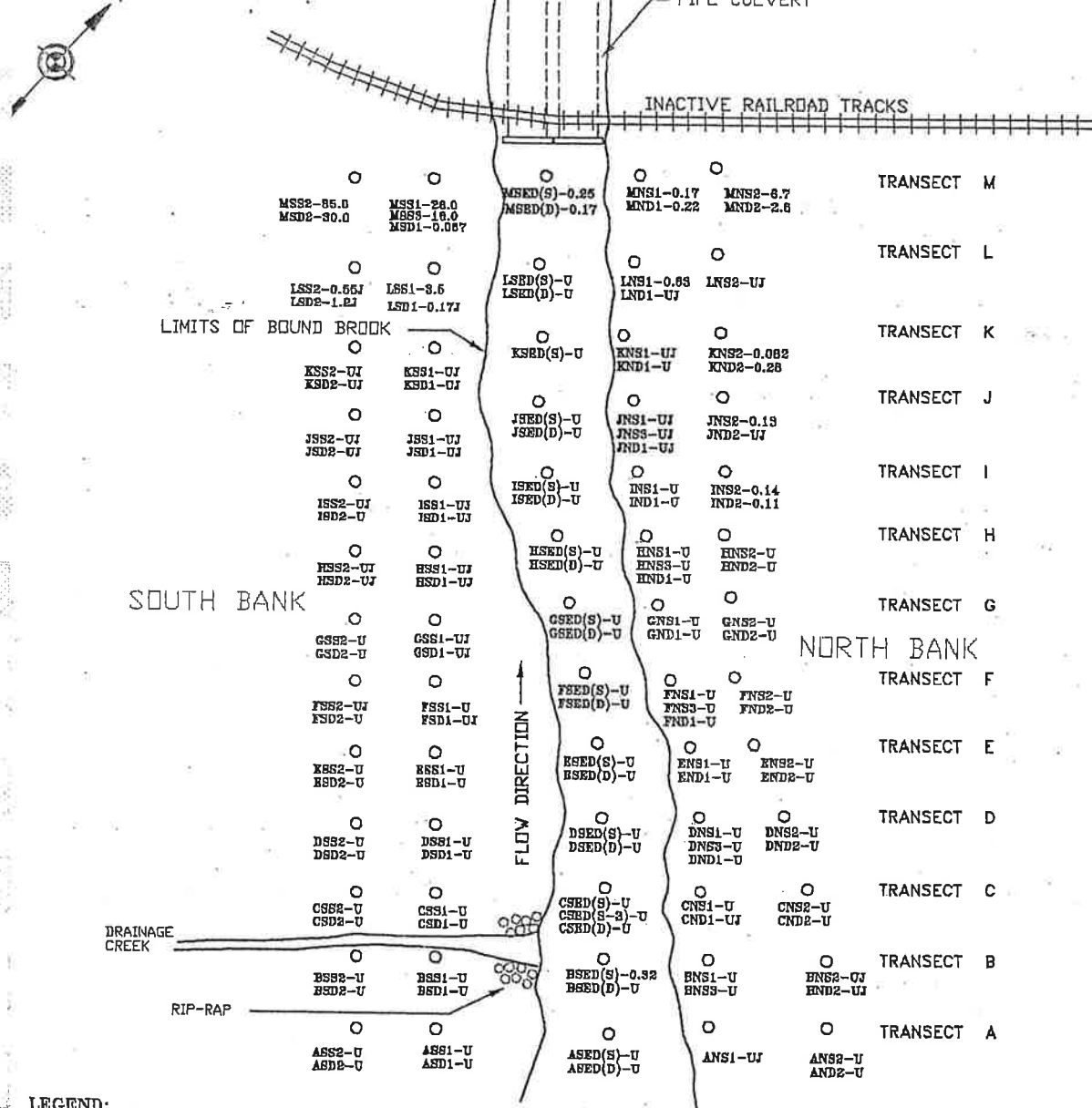
START PROJECT MANAGER: M. MARKOFF

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C.C. JOHNSON & MALHOTRA, P.C., RESOURCE APPLICATIONS, INC.,  
R.E. SARRIERA ASSOCIATES, AND GRB ENVIRONMENTAL SERVICES, INC.



# LEGEND:

U = NON DETECTED COMPOUND  
J = ESTIMATED VALUE

SAMPLE DESIGNATION EXAMPLE No. 1

ANS1  
A = TRANSECT A  
N = NORTH BANK  
S = SURFACE (0-6") SOIL SAMPLE  
1 = SAMPLE No.1, COLLECTED 5.0' FROM WHERE THE STREAM MEETS THE BANK

SAMPLE DESIGNATION EXAMPLE No.2

BSD2 WHERE:  
B = TRANSECT B  
S = SOUTH BANK  
D = DEPTH (18"-24" OR 0-6" INTERVAL ABOVE FIRST GROUNDWATER OR REFUSAL) SOIL SAMPLE  
2 = SAMPLE No.2, COLLECTED 10.0' FROM WHERE THE STREAM MEETS THE BANK

SAMPLE DESIGNATION EXAMPLE No. 3

CSED(S) WHERE:  
C = TRANSECT C  
SED = SEDIMENT SAMPLE  
(S) = SURFACE (0-6") SAMPLE COLLECTED FROM THE STREAM BED; (D) = 18"-24" OR 0-6" ABOVE REFUSAL

\* All results expressed in mg/kg (ppm).

TRANSECTS ARE SPACED ON 50 FEET CENTERS

- DRAWING NOT TO SCALE -

FIGURE 3 - CORNELL-DUBILIER ELECTRONICS  
SOIL AND SEDIMENT SAMPLING LOCATIONS  
INDICATING TOTAL PCB CONCENTRATIONS.  
BOUND BROOK - REACH 1/TRANSECTS A - M

US EPA REMOVAL ACTION BRANCH

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM  
CONTRACT# 68-W5-DD19

DRAWN BY : J. HAMPTON JR.

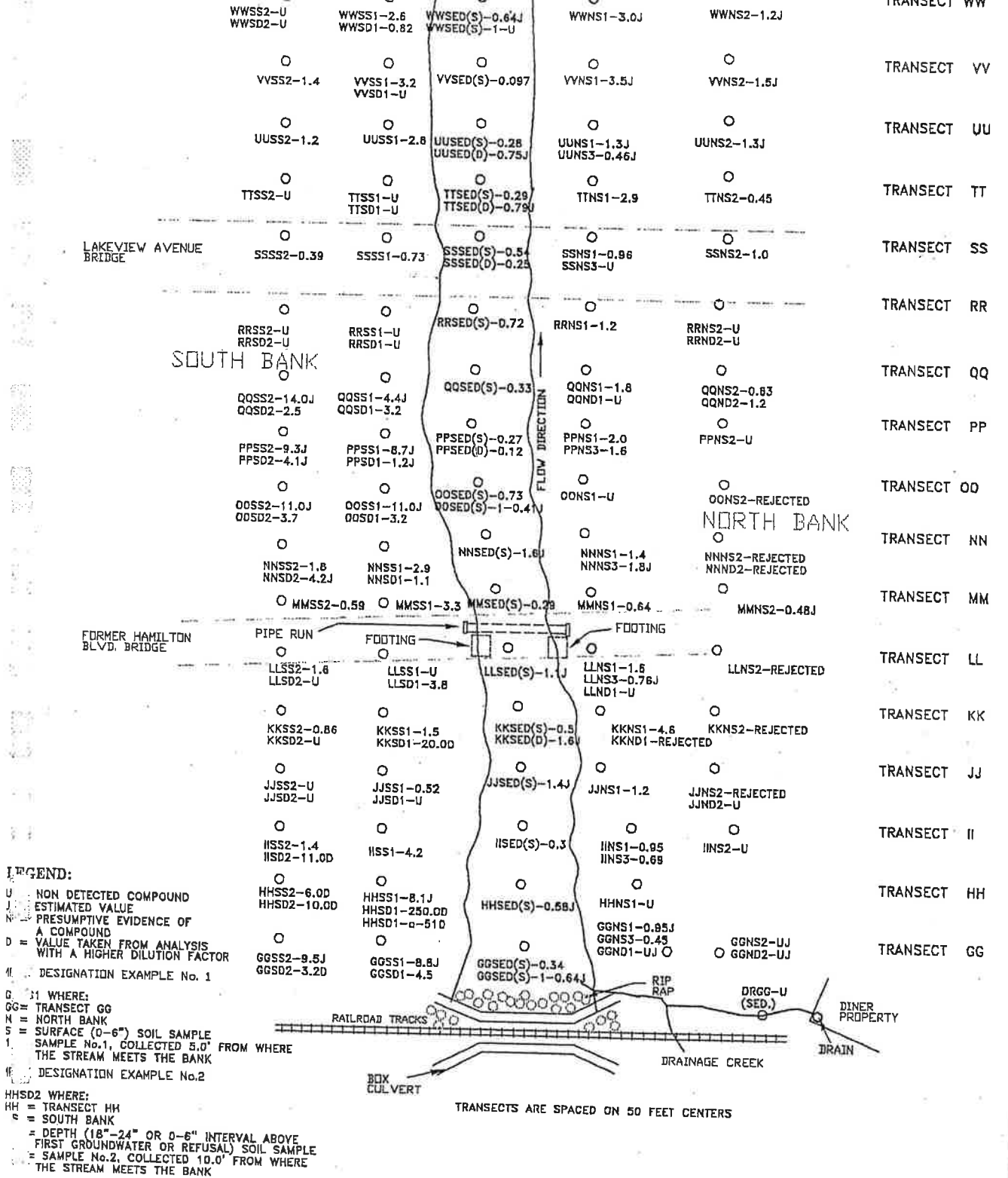
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START PROJECT MANAGER: M. MAHNKOPF



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R.E. SARRIERA ASSOCIATES, AND GRB ENVIRONMENTAL SERVICES, INC.

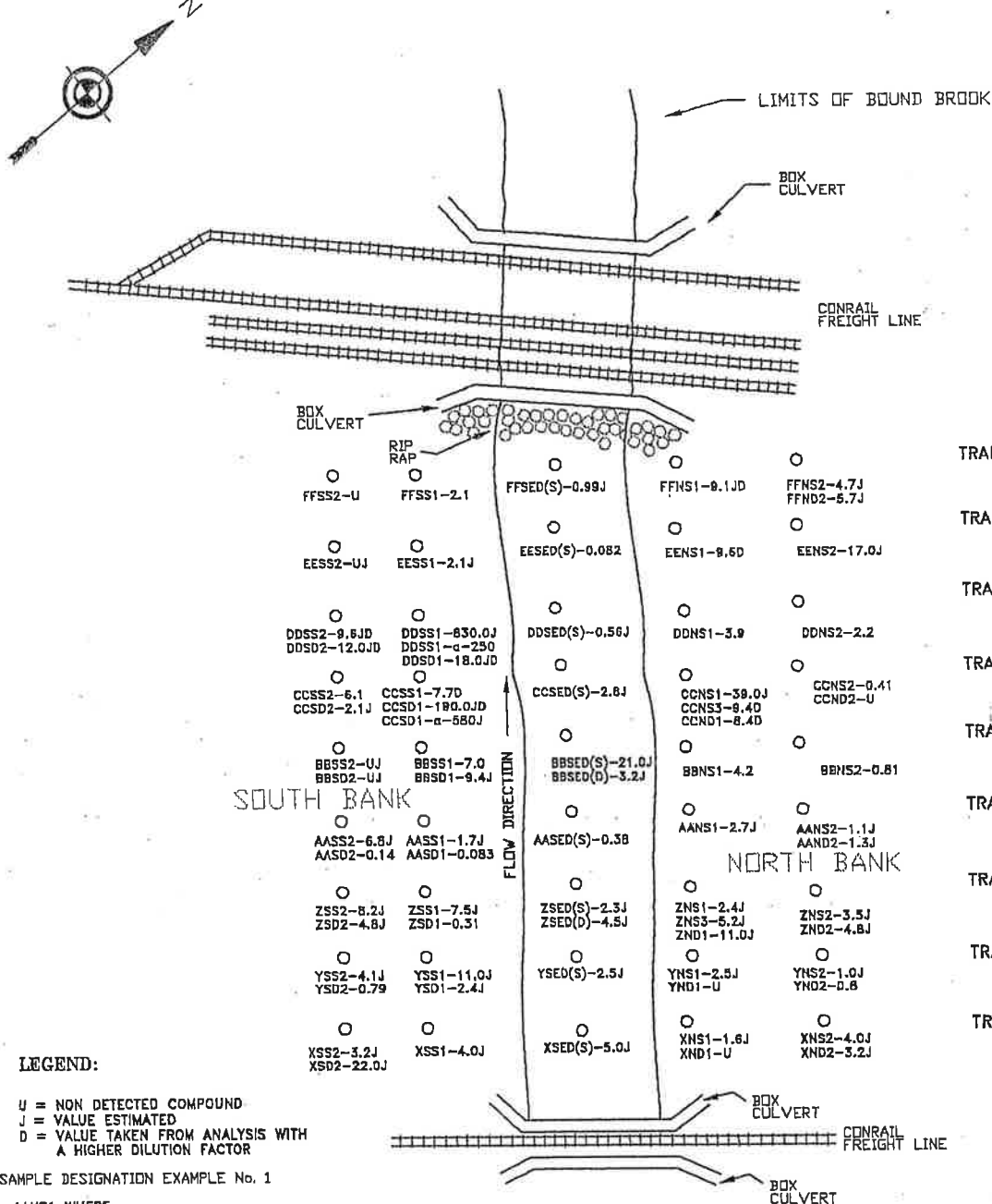


- DRAWING NOT TO SCALE -

<b>FIGURE 6 - CORNELL-DUBILIER ELECTRONICS          SOIL AND SEDIMENT SAMPLING LOCATIONS          INDICATING TOTAL PCB CONCENTRATIONS.          BOUND BROOK - REACH 4/TRANSECTS GG - WW</b>	
<b>US EPA REMOVAL ACTION BRANCH</b> SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM CONTRACT# 88-W5-0019	
DRAWN BY :	J. HAMPTON JR.
EPA TASK MONITOR:	D. HARKAY
START PROJECT MANAGER:	M. MAHNKOPF

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 FEDERAL PROGRAMS DIVISION

IN ASSOCIATION WITH PRC ENVIRONMENTAL MANAGEMENT, INC.,  
 C.C. JOHNSON & MALHOTRA, P.C., RESOURCE APPLICATIONS, INC.,  
 R.E. SARRIERA ASSOCIATES, AND GRB ENVIRONMENTAL SERVICES, INC.



- DRAWING NOT TO SCALE -

**FIGURE 5 - CORNELL-DUBILIER ELECTRONICS  
 SOIL AND SEDIMENT SAMPLING LOCATIONS  
 INDICATING TOTAL PCB CONCENTRATIONS.  
 BOUND BROOK - REACH 3/TRANSECTS X - FF**

US EPA REMOVAL ACTION BRANCH  
 SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM  
 CONTRACT# BB-W5-0019

DRAWN BY: J. HAMPTON JR.

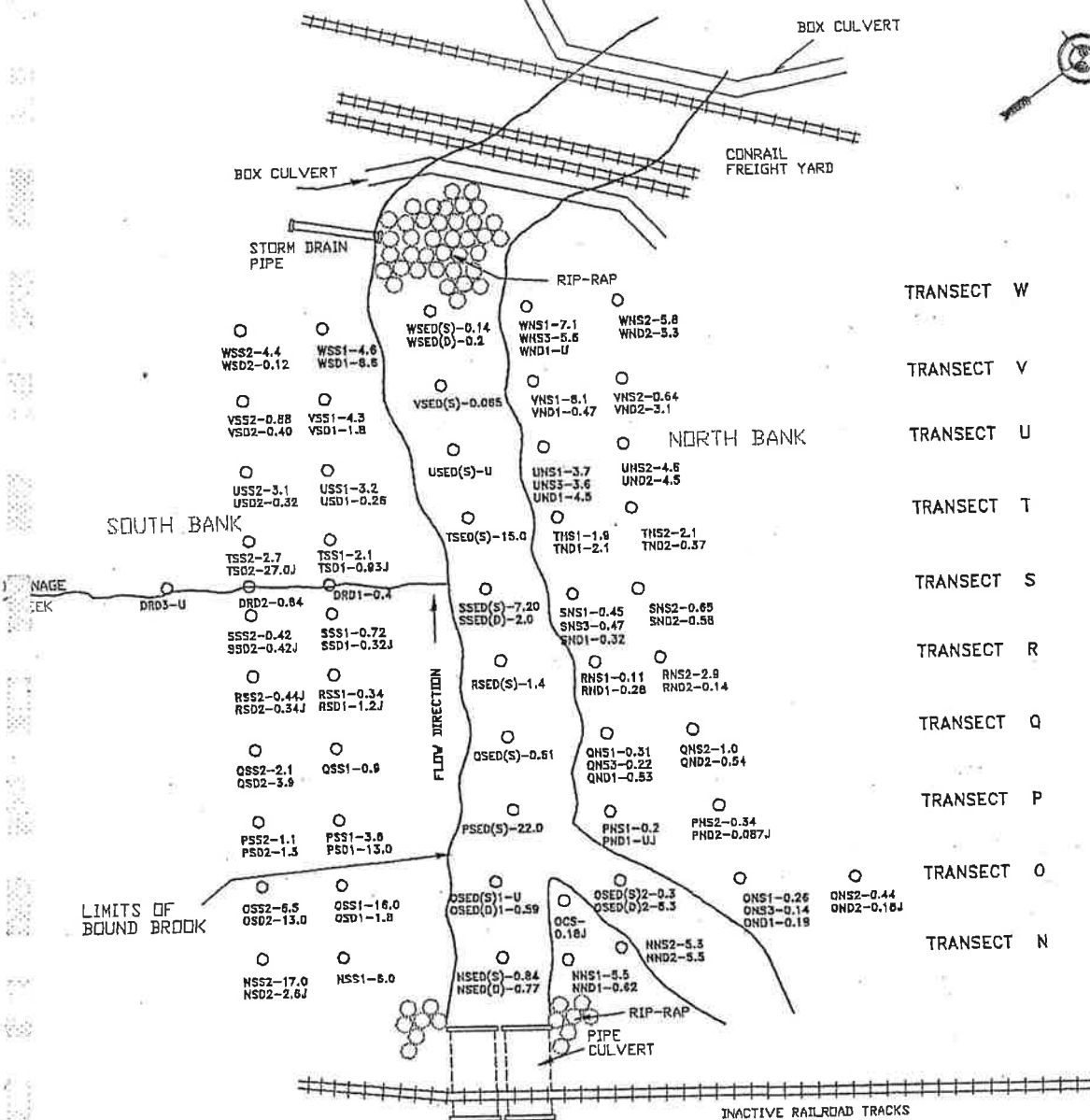
EPA TASK MONITOR: D. HARKAY

START PROJECT MANAGER: M. MAHNKOPF



Roy F. Weston, Inc.  
 FEDERAL PROGRAMS DIVISION

IN ASSOCIATION WITH PRC ENVIRONMENTAL MANAGEMENT, INC.,  
 C.C. JOHNSON & MALHOTRA, P.C., RESOURCE APPLICATIONS, INC.,  
 R.E. SARRIERA ASSOCIATES, AND GRB ENVIRONMENTAL SERVICES, INC.



TRANSECT W  
TRANSECT V  
TRANSECT U  
TRANSECT T  
TRANSECT S  
TRANSECT R  
TRANSECT Q  
TRANSECT P  
TRANSECT O  
TRANSECT N

**LEGEND:**

U = NON DETECTED COMPOUND  
J = ESTIMATED VALUE

SAMPLE DESIGNATION EXAMPLE No. 1

NNS1  
N = TRANSECT N  
N = NORTH BANK  
S = SURFACE (0-6") SOIL SAMPLE  
1 = SAMPLE No.1, COLLECTED 5.0' FROM WHERE THE STREAM MEETS THE BANK

SAMPLE DESIGNATION EXAMPLE No.2

OSD2 WHERE:  
O = TRANSECT O  
S = SOUTH BANK  
D = DEPTH (18"-24" OR 0-6" INTERVAL ABOVE FIRST GROUNDWATER OR REFUSAL) SOIL SAMPLE  
2 = SAMPLE No.2, COLLECTED 10.0' FROM WHERE THE STREAM MEETS THE BANK

SAMPLE DESIGNATION EXAMPLE No. 3

PSD(S) WHERE:  
P = TRANSECT P  
SED = SEDIMENT SAMPLE  
(S) = SURFACE (0-6") SAMPLE COLLECTED FROM THE STREAM BED; (D) = 18"-24" OR 0-6" ABOVE REFUSAL

\* All results expressed in mg/kg (ppm).

TRANSECTS ARE SPACED ON 50 FEET CENTERS

- DRAWING NOT TO SCALE -

**FIGURE 4 - CORNELL-DUBILIER ELECTRONICS  
SOIL AND SEDIMENT SAMPLING LOCATIONS  
INDICATING TOTAL PCB CONCENTRATIONS.  
BOUND BROOK - REACH 2/TRANSECTS N - W**

**US EPA REMOVAL ACTION BRANCH**  
SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM  
CONTRACT# 68-W5-0019



Roy F. Weston, Inc.  
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C.C. JOHNSON & MALHOTRA, P.C., RESOURCE APPLICATIONS, INC.,  
R.E. SARRIERA ASSOCIATES, AND GRB ENVIRONMENTAL SERVICES, INC.

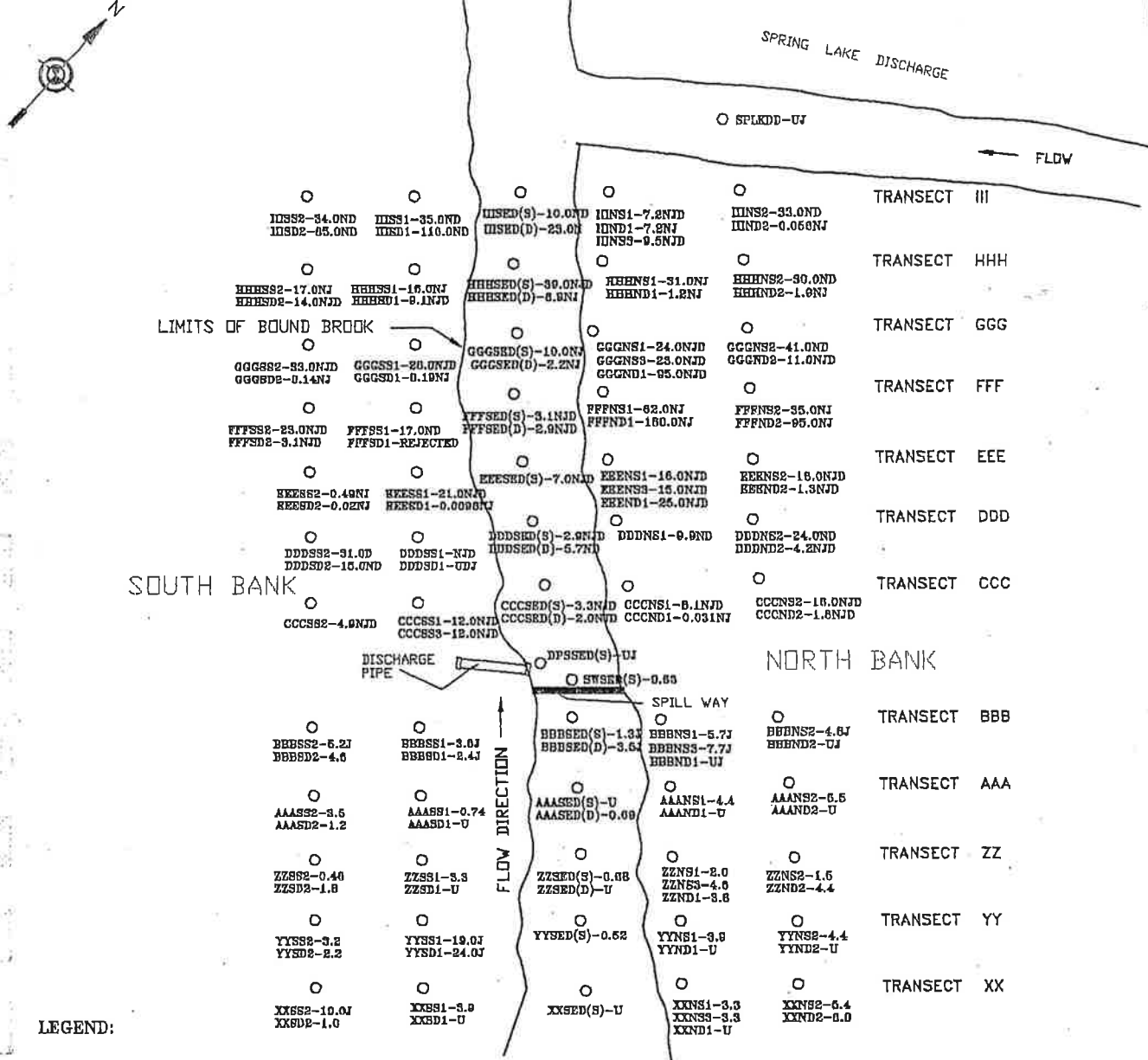
DRAWN BY : J. HAMPTON JR.

EPA TASK MONITOR: D. HARKAY

START PROJECT MANAGER: M. MAHNKOPF

C:\BITMAP\32000D.DWG





TRANSECTS XX - BBB ARE SPACED ON 100 FEET CENTERS  
TRANSECTS BBB - III ARE SPACED ON 200 FEET CENTERS

- DRAWING NOT TO SCALE -

FIGURE 7 - CORNELL-DUBILIER ELECTRONICS  
SOIL AND SEDIMENT SAMPLING LOCATIONS  
INDICATING TOTAL PCB CONCENTRATIONS,  
BOUND BROOK - REACH 5/TRANSECTS XX - III

US EPA REMOVAL ACTION BRANCH

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

CONTRACT# 68-W5-DD19

DRAWN BY: J. HAMPTON JR.

EPA TASK MONITOR: D. HARKAY

START PROJECT MANAGER: M. MAHNKOPF



Roy F. Weston, Inc.  
FEDERAL PROGRAMS DIVISION

IN ASSOCIATION WITH PRC ENVIRONMENTAL MANAGEMENT, INC.,  
C.C. JOHNSON & MALHOTRA, P.C., RESOURCE APPLICATIONS, INC.,  
R.E. SARRIERA ASSOCIATES, AND GRB ENVIRONMENTAL SERVICES, INC.

D:\BITMAP\32000H.DWG

WESTON

Roy F. Weston, Inc.  
FEDERAL PROGRAMS DIVISION

EPA TASK MONITOR: J. HAMPTON JR.

US EPA REMOVAL ACTION BRANCH  
SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM  
CONTRACT# 88-W5-0019

FIGURE 8 - CORNELL-DUBILIER ELECTRONICS  
SOIL AND SEDIMENT SAMPLING LOCATIONS  
INDICATING TOTAL PCB CONCENTRATIONS  
BOUND BROOK - REACH 6/TRANSSECTS JJJ - WWW

- DRAWING NOT TO SCALE -

\* All results expressed in mg/kg (ppm).  
ABOVE REFUSAL  
THE STREAM BED: (D) = 18"-24" OR 0-6"  
(S) = SURFACE (0-6") SAMPLE COLLECTED FROM  
SED = SEDIMENT SAMPLE  
LLT = TRANSSECT LLT  
LLSED(S) WHERE:  
SAMPLE DESIGNATION EXAMPLE No. 3  
THE STREAM MEETS THE BANK  
2 = SAMPLE No. 2, COLLECTED 10.0' FROM WHERE  
FIRST GROUNDWATER OR REFUSAL SOIL SAMPLE  
D = DEPTH (18"-24" OR 0-6" INTERVAL ABOVE  
S = SOUTH BANK  
KKK = TRANSSECT KKK  
KKKSD2 WHERE:  
SAMPLE DESIGNATION EXAMPLE No. 2  
THE STREAM MEETS THE BANK  
1 = SAMPLE No. 1, COLLECTED 5.0' FROM WHERE  
SURFACE (0-6") SOIL SAMPLE  
N = NORTH BANK  
JJJ = TRANSSECT JJJ  
JJJSD1 WHERE:  
SAMPLE DESIGNATION EXAMPLE No. 1  
WITH A HIGHER DILUTION FACTOR  
D = VALUE TAKEN FROM ANALYSIS  
N = PRESUMPTIVE EVIDENCE OF A COMPOUND  
J = ESTIMATED VALUE  
U = NON DETECTED COMPOUND

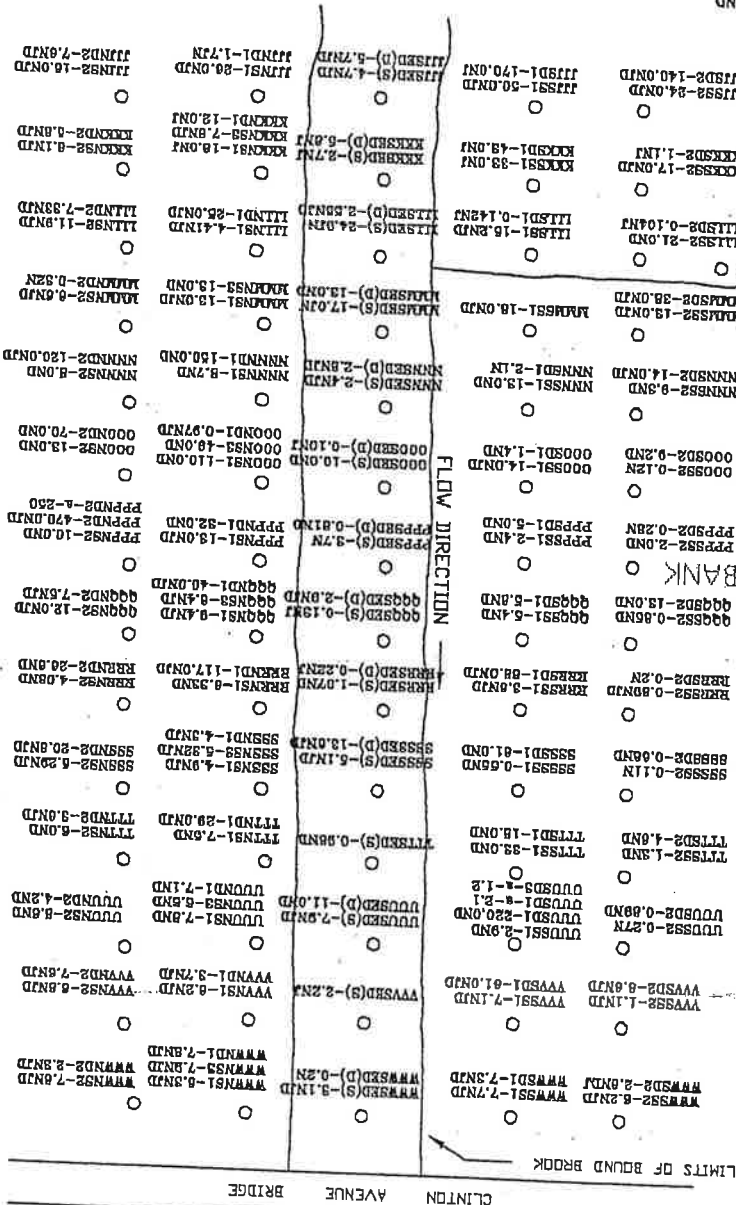
TRANSSECTS ARE SPACED ON 200 FEET CENTERS

LEGEND:

DRAINAGE

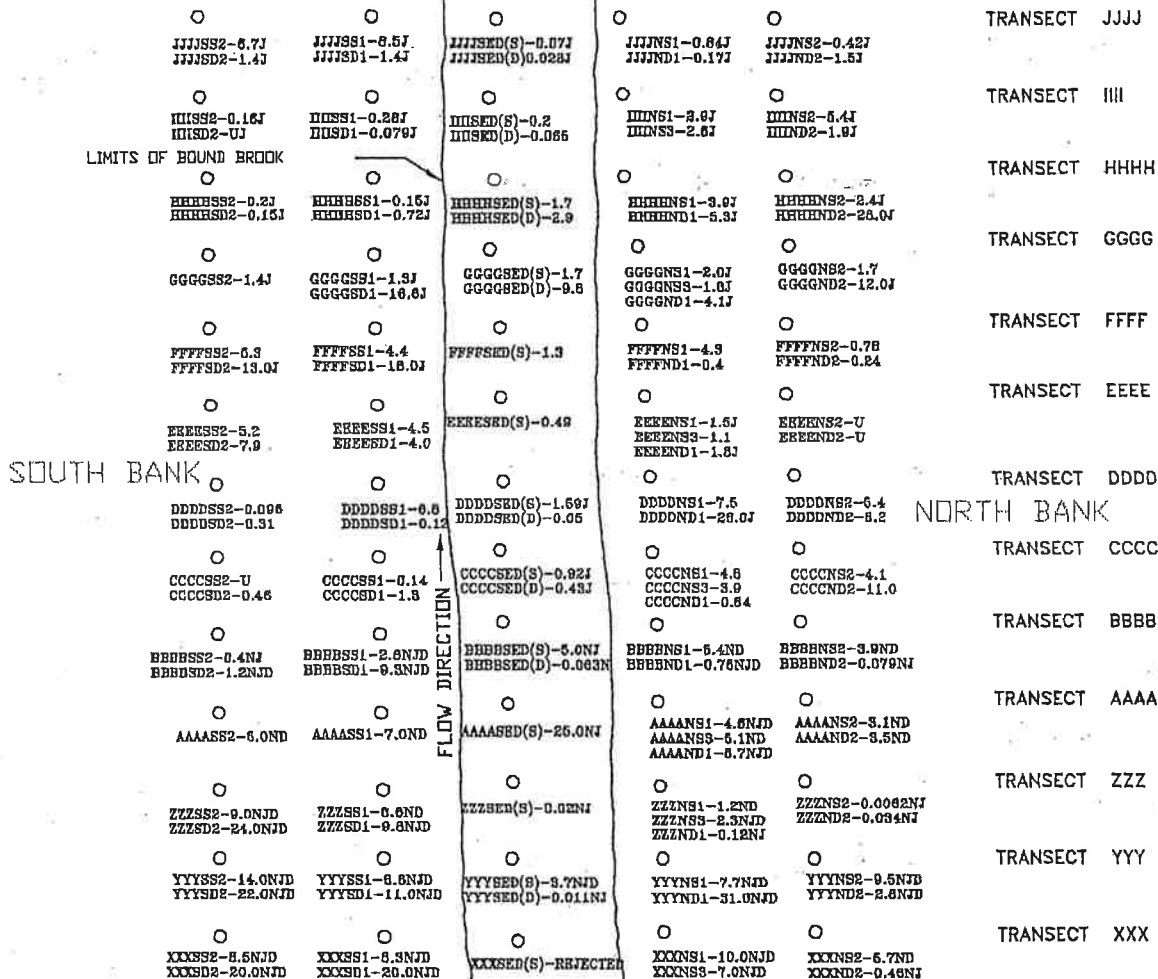
SOUTH BANK

FLOW DIRECTION



NORTH BANK





## LEGEND:

TRANSECTS ARE SPACED ON 200 FEET CENTERS

U = NON DETECTED COMPOUND  
 J = ESTIMATED VALUE  
 N = PRESUMPTIVE EVIDENCE OF A COMPOUND  
 D = VALUE TAKEN FROM ANALYSIS WITH A HIGHER DILUTION FACTOR

## SAMPLE DESIGNATION EXAMPLE No. 1

XXXNS1 WHERE:  
 XXX = TRANSECT XXX  
 N = NORTH BANK  
 S = SURFACE (0-6") SOIL SAMPLE  
 1 = SAMPLE No.1, COLLECTED 5.0' FROM WHERE  
 THE STREAM MEETS THE BANK

## SAMPLE DESIGNATION EXAMPLE No.2

YYYS2 WHERE:  
 YYY = TRANSECT YYY  
 S = SOUTH BANK  
 D = DEPTH (18"-24" OR 0-6" INTERVAL ABOVE  
 FIRST GROUNDWATER OR REFUSAL) SOIL SAMPLE  
 2 = SAMPLE No.2, COLLECTED 10.0' FROM WHERE  
 THE STREAM MEETS THE BANK

## SAMPLE DESIGNATION EXAMPLE No. 3

ZZZSD(S) WHERE:  
 ZZZ = TRANSECT ZZZ  
 SED = SEDIMENT SAMPLE  
 (S) = SURFACE (0-6") SAMPLE COLLECTED FROM  
 THE STREAM BED; (D) = 18"-24" OR 0-6"  
 ABOVE REFUSAL.

\* All results expressed in mg/kg (ppm).



Roy F. Weston, Inc.  
 FEDERAL PROGRAMS DIVISION

IN ASSOCIATION WITH PRC ENVIRONMENTAL MANAGEMENT, INC.,  
 G.C. JOHNSON & MALHOTRA, P.C., RESOURCE APPLICATIONS, INC.,  
 R.E. SARRIERA ASSOCIATES, AND GRB ENVIRONMENTAL SERVICES, INC.

- DRAWING NOT TO SCALE -

FIGURE 9 - CORNELL-DUBILIER ELECTRONICS  
 SOIL AND SEDIMENT SAMPLING LOCATIONS  
 INDICATING TOTAL PCB CONCENTRATIONS.  
 BOUND BROOK - REACH 7/TRANSECTS XXX - JJJJ

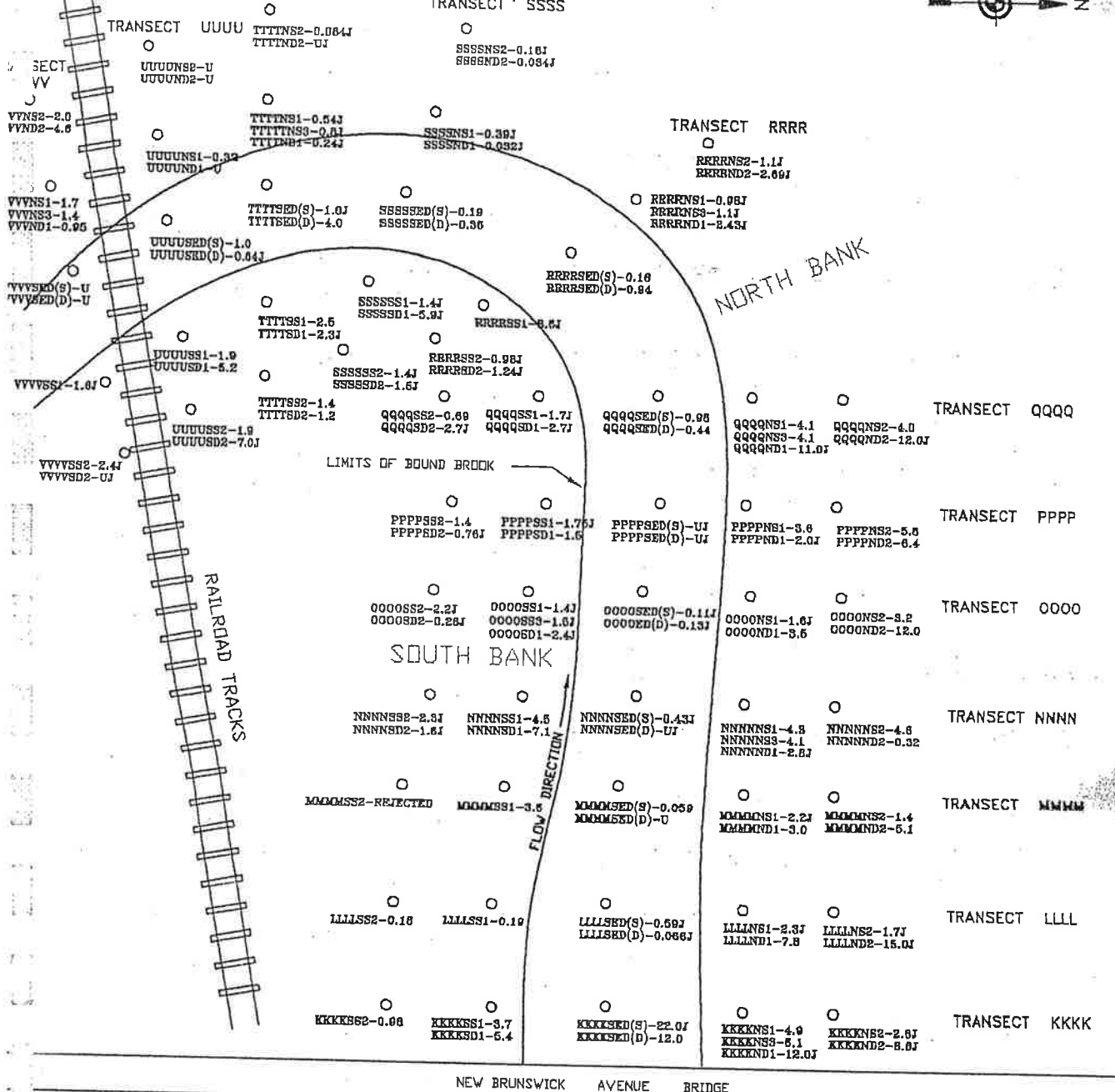
US EPA REMOVAL ACTION BRANCH

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM  
 CONTRACT# 68-W5-0019

DRAWN BY: J. HAMPTON JR.

EPA TASK MONITOR: D. HARKAY

START PROJECT MANAGER: M. MAHNKOPF



# LEGEND:

TRANSECTS ARE SPACED ON 200 FEET CENTERS

- U = NON DETECTED COMPOUND
- J = ESTIMATED VALUE
- N = PRESUMPTIVE EVIDENCE OF A COMPOUND
- D = VALUE TAKEN FROM ANALYSIS WITH A HIGHER DILUTION FACTOR

## SAMPLE DESIGNATION EXAMPLE No. 1

KKKKNS1 WHERE:  
 KKKK = TRANSECT KKKK  
 N = NORTH BANK  
 S = SURFACE (0-6") SOIL SAMPLE  
 1 = SAMPLE No.1, COLLECTED 5.0' FROM WHERE THE STREAM MEETS THE BANK

## SAMPLE DESIGNATION EXAMPLE No.2

LLLLSD2 WHERE:  
 LLLL = TRANSECT LLLL  
 S = SOUTH BANK  
 D = DEPTH (18"-24" OR 0-6" INTERVAL ABOVE FIRST GROUNDWATER OR REFUSAL) SOIL SAMPLE  
 2 = SAMPLE No.2, COLLECTED 10.0' FROM WHERE THE STREAM MEETS THE BANK

## SAMPLE DESIGNATION EXAMPLE No. 3

MMMMSED(S) WHERE:  
 MMMM = TRANSECT MMMM  
 ED = SEDIMENT SAMPLE  
 (S) = SURFACE (0-6") SAMPLE COLLECTED FROM THE STREAM BED; (D) = 18"-24" OR 0-6" ABOVE REFUSAL

\* All results expressed in mg/kg (ppm).

**WESTON**

Roy F. Weston, Inc.  
 FEDERAL PROGRAMS DIVISION

IN ASSOCIATION WITH FRC ENVIRONMENTAL MANAGEMENT, INC.,  
 C.C. JOHNSON & MALHOTRA, P.C., RESOURCE APPLICATIONS, INC.,  
 R.E. SARRIERA ASSOCIATES, AND GRS ENVIRONMENTAL SERVICES, INC.

- DRAWING NOT TO SCALE -

FIGURE 10 - CORNELL-DUBILLER ELECTRONICS  
 SOIL AND SEDIMENT SAMPLING LOCATIONS  
 INDICATING TOTAL PCB CONCENTRATIONS  
 BOUND BROOK - REACH 5/TRANSECTS KKKK - VVVV

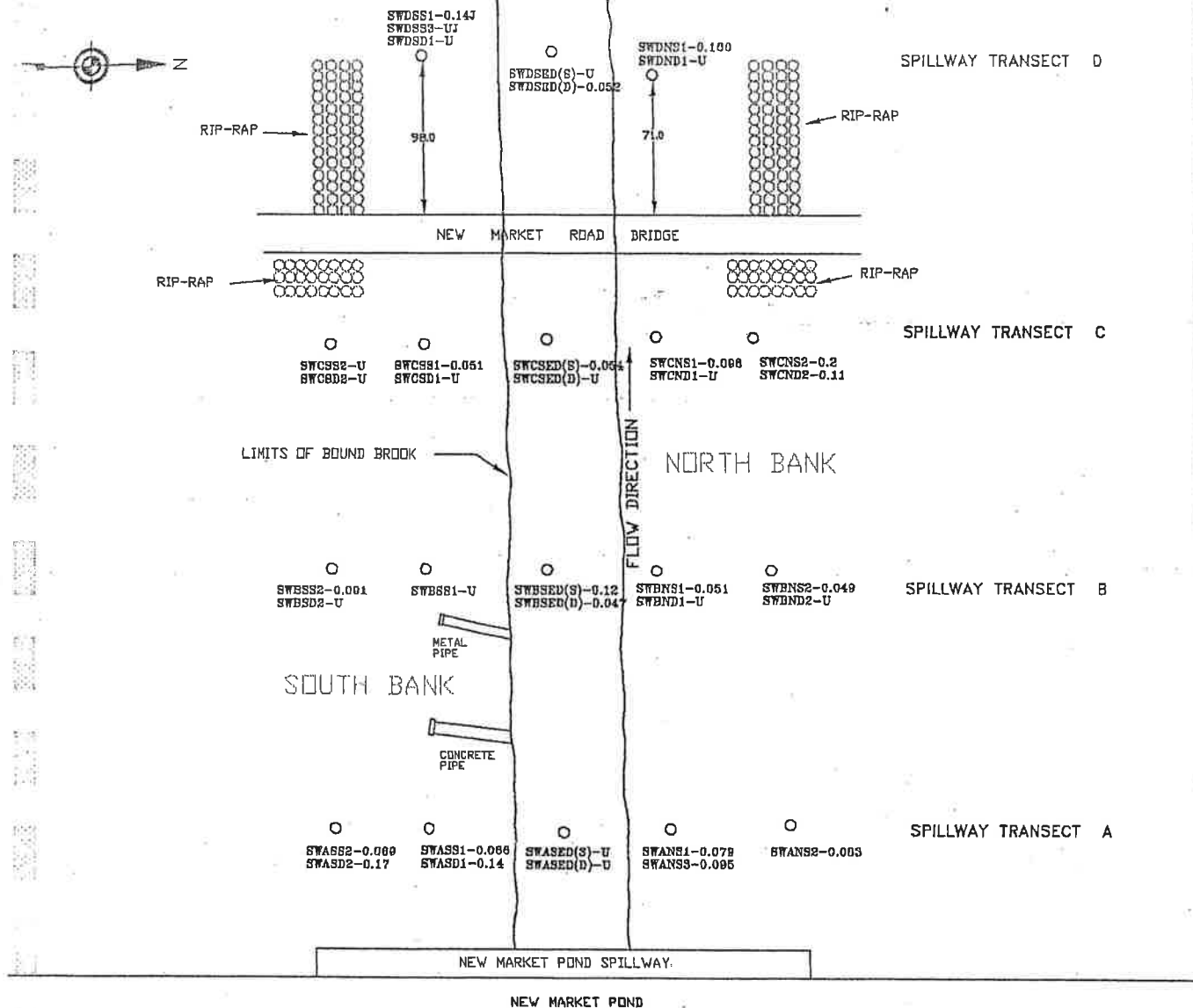
US EPA REMOVAL ACTION BRANCH  
 SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM  
 CONTRACT # 85-95-0018

DRAWN BY: J. HAMPTON JR.

EPA TASK MONITOR: D. HARKAT

START PROJECT MANAGER: M. MAHMOUD

U:\ENTRAP\320002.DWG



#### LEGEND:

U = NON DETECTED COMPOUND  
 J = ESTIMATED VALUE  
 N = PRESUMPTIVE EVIDENCE OF A COMPOUND  
 D = VALUE TAKEN FROM ANALYSIS WITH A HIGHER DILUTION FACTOR

SPILLWAY TRANSECTS A - C ARE SPACED ON 50 FEET CENTERS

#### SAMPLE DESIGNATION EXAMPLE No. 1

SWANS1 WHERE:  
 SWA = SPILLWAY TRANSECT A  
 N = NORTH BANK  
 S = SURFACE (0-6") SOIL SAMPLE  
 1 = SAMPLE No.1, COLLECTED 5.0' FROM WHERE  
 THE STREAM MEETS THE BANK

#### SAMPLE DESIGNATION EXAMPLE No.2

SWBSD2 WHERE:  
 SWB = SPILLWAY TRANSECT B  
 S = SOUTH BANK  
 D = DEPTH (18"-24" OR 0-6" INTERVAL ABOVE  
 FIRST GROUNDWATER OR REFUSAL) SOIL SAMPLE  
 2 = SAMPLE No.2, COLLECTED 10.0' FROM WHERE  
 THE STREAM MEETS THE BANK

#### SAMPLE DESIGNATION EXAMPLE No. 3

SWCSED(S) WHERE:  
 SWC = SPILLWAY TRANSECT C  
 SED = SEDIMENT SAMPLE  
 (S) = SURFACE (0-6") SAMPLE COLLECTED FROM  
 THE STREAM BED; (D) = 18"-24" OR 0-6"  
 ABOVE REFUSAL

\* All results expressed in mg/kg (ppm).

- DRAWING NOT TO SCALE -

FIGURE 11 - CORNELL-DUBILIER ELECTRONICS  
 SOIL AND SEDIMENT SAMPLING LOCATIONS  
 INDICATING TOTAL PCB CONCENTRATIONS.  
 BOUND BROOK - REACH 9/SPILLWAY TRANSECTS A-D

US EPA REMOVAL ACTION BRANCH

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

CONTRACT# 68-W5-0018

DRAWN BY : J. HAMPTON JR.

EPA TASK MONITOR: D. HARKAY

START PROJECT MANAGER: M. MAHNKOPF



Roy F. Weston, Inc.  
 FEDERAL PROGRAMS DIVISION

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 R.E. SARRIERA ASSOCIATES, AND GRB ENVIRONMENTAL SERVICES, INC.



## **APPENDIX B**

### **MIDDLESEX COUNTY HEALTH DEPARTMENT INVESTIGATIONS**

## Investigation Summary

SOURCE <u>MEMORIAL PARK</u>			COMPLAINT# _____ FI # _____
LOCATION <u>ELM STREET</u>	<u>SOUTH PLAINFIELD</u>		DATE <u>7/17/02</u> TIME <u>9:00</u> <sup>a.m.</sup> <sub>p.m.</sub>
No.	Street	Municipality	CHAPTER REF. _____
MAILING ADDRESS _____			<input type="checkbox"/> SINGLE <input type="checkbox"/> MULTIPLE
PERSON(S) INTERVIEWED _____			CLIMATIC CONDITION: <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Fog <input type="checkbox"/> Rain <input type="checkbox"/> Snow WIND: Vel. <u>5-7</u> TEMP. <u>88°F</u> Dir. <u>South</u>
Title _____			
Title _____			
<input checked="" type="checkbox"/> PREMISES ENTERED/TIME IN <u>9:45</u> <sup>a.m.</sup> <sub>p.m.</sub> OUT <u>10:45</u> <sup>a.m.</sup> <sub>p.m.</sub>			
<input type="checkbox"/> N.C.A. <input type="checkbox"/> V.N. # _____ SPECIFIC _____			

## OBSERVATIONS:

THE SITE IS OFF OF ELM STREET, SOUTH PLAINFIELD. TWO (2) AREAS OF THE PARK ARE FENCED OFF WITH PLASTIC CONSTRUCTION FENCE. THE FENCE IS BROKEN AND MISSING IN MANY AREAS. A black liquid was observed seeping from the ground at a number of spots within the fenced area. A soil surface sample was taken from the western fence area. A large number of dead birds was noted within the areas, mostly stuck in the liquid. The liquid had no detectible odor and had the appearance of tar, or heavy petroleum. Two (2) water samples were taken at the Bound Brook near the fenced sites. The area was photographed and a map was drafted.

## RECOMMENDATIONS \_\_\_\_\_

INVESTIGATED BY: DL Felt

signed

SEHE

title

PROCESSED FOR  
FURTHER ACTION

Super.

APPROVED BY: \_\_\_\_\_

ASSISTED BY: \_\_\_\_\_

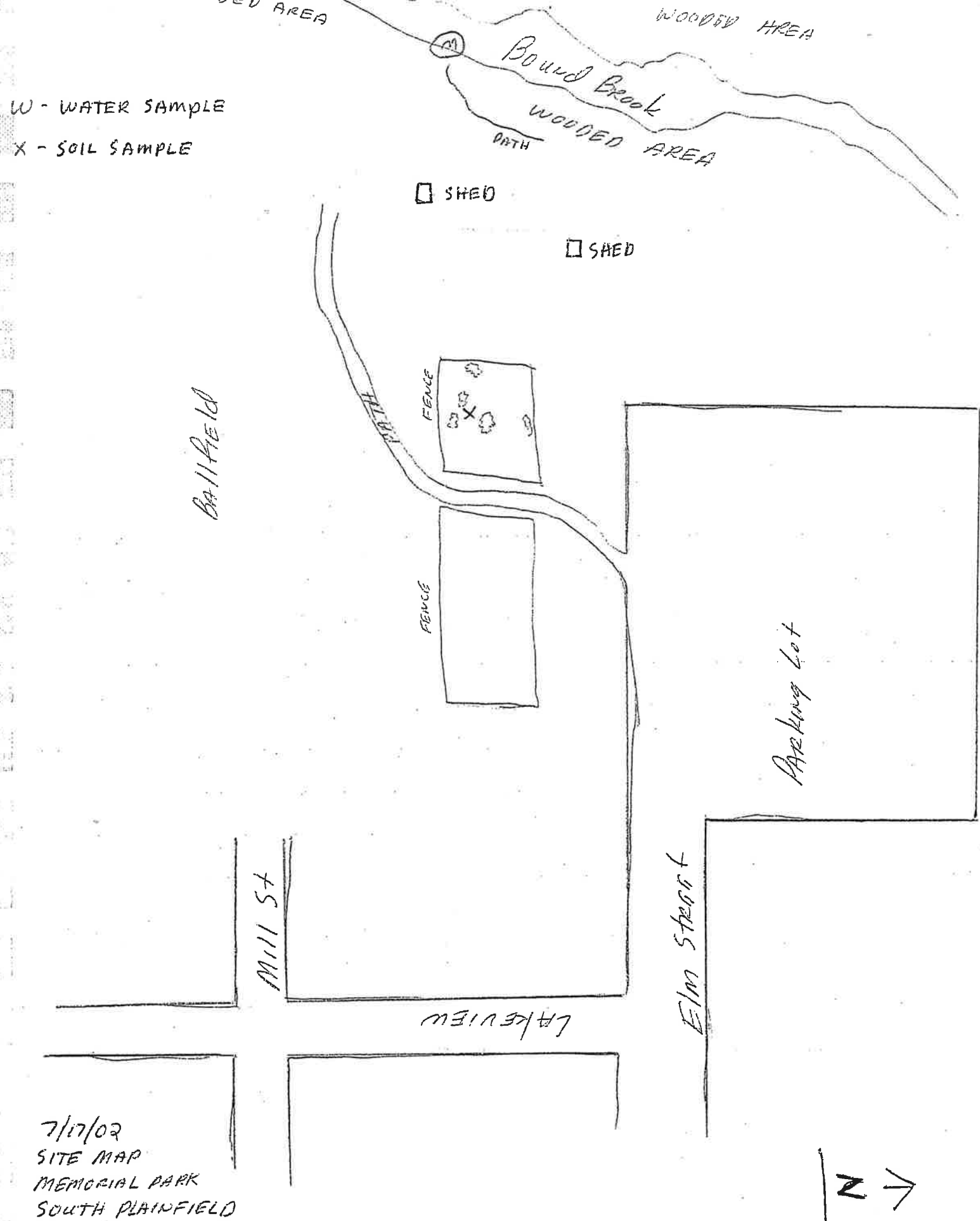
signed

title

Specific

Date

W - WATER SAMPLE  
X - SOIL SAMPLE



73872



# Garden State Laboratories, Inc.

### Bacteriological and Chemical Testing

410 Hillside Avenue  
Hillside, New Jersey 07205

Toll Free: 800-273-8901

Telephone: 908-688-8900

Fax: 908-688-8966

email: hklein@qslabs.com

Internet: [www.gslabs.com](http://www.gslabs.com)

Iathew Klein, M.S., Founder (1916-1996)

Frederick Klein, M.S., Laboratory Director

## REPORT OF ANALYSIS

TO: GARDEN STATE LABS

REPORT # 9400000001.3

CLIENT # GSL01

DATE SUBMITTED: 7/1/94

ATT:

AMPLE TYPE: USE FOR SAMPLES RUN AT NO DILUTION

SAMPLE ID: CALCULATED METHOD DETECTION LIMITS

SAMPLE LOCATION:

RECEIVED

JUL 24 2002

DATE SAMPLED:

TIME SAMPLED:

MCDEH/WB

[illegible]

= less than, not detected.











# GARDEN STATE LABORATORIES, INC.

Bacteriological and Chemical Testing

410 Hillside Avenue

Hillside, NJ 07205

Telephone (908) 688-8900

Fax (908) 688-8966

FOR LAB. USE ONLY

LAB #

RPT #

CLIENT #

CHG

## CHAIN OF CUSTODY RECORD

PRESS HARD - USE BALL POINT PEN

NAME OF CLIENT

Middlesex County Health Dept.

ADDRESS

711 Jersey Avenue

DATE SUBMITTED

7-17-02

TIME SUBMITTED

240P

CITY

New Brunswick

STATE NJ

ZIP 08901

CONTACT

Richard Spilatore

732 745-8480

TEL # ( ) 745-8484

SAMPLE(S) TYPE

Well

Public Supply

Surface Water

Other Soil

SAMPLE(S) ID

Case # 0100-2

5107425

SAMPLE LOCATION

Memorial Park, Elm St., South Plainfield

DATE SAMPLED

7-17-02

TIME SAMPLED

9:45AM

PRESERVED

yes

IF SAMPLE(S) CONTAIN HAZARDOUS SUBSTANCES, CHECK HERE ☐ AND SPECIFY

IF SAMPLE(S) REQUIRE SPECIAL QA/QC OR HANDLING, CHECK HERE ☐ AND SPECIFY

TESTS REQUESTED: ☐ ROUTINE (POTABLE WATER- T. COLI, S.P.C. NATURAL WATERS- F. COLI:

FOODS-S.P.C., T. COLI, DM)

MICROBIOLOGY	WET CHEMISTRY	HEAVY METALS	ORGANICS
STD. PLATE COUNT <input type="checkbox"/>	SDWA 2° <input type="checkbox"/> CORROS. <input type="checkbox"/>	SDWA 1° <input type="checkbox"/> EP TOX <input type="checkbox"/>	VOA <input type="checkbox"/> A-280 <input type="checkbox"/>
TOTAL COLIFORM <input type="checkbox"/>	BOD <input type="checkbox"/> TSS <input type="checkbox"/>	POLLUTANTS <input type="checkbox"/>	THMs <input type="checkbox"/> PEST <input type="checkbox"/>
FECAL COLIFORM <input type="checkbox"/>	COD <input type="checkbox"/> TOC <input type="checkbox"/>	LEAD <input type="checkbox"/> SODIUM <input type="checkbox"/>	HERB <input type="checkbox"/> EP TOX <input type="checkbox"/>
FECAL STREP. <input type="checkbox"/>	PET HC <input checked="" type="checkbox"/> OIL/GR. <input type="checkbox"/>	IRON <input type="checkbox"/> MANG. <input type="checkbox"/>	BASE/NEUTRAL <input type="checkbox"/>
STAPH., C.P. <input type="checkbox"/>	TURB. <input type="checkbox"/> NO3-N <input type="checkbox"/>	COPPER <input type="checkbox"/> Cd <input type="checkbox"/>	ACID EXTRACTABLES <input type="checkbox"/>
SALMONELLA <input type="checkbox"/>	NO2-N <input type="checkbox"/> NH3-N <input type="checkbox"/>	Cr <input type="checkbox"/> Zn <input type="checkbox"/>	PCBs <input checked="" type="checkbox"/>
SHIGELLA <input type="checkbox"/>	TKN <input type="checkbox"/> SO4 <input type="checkbox"/>	Al <input type="checkbox"/> ID #27 <input type="checkbox"/>	ANALYSIS BY GC/MS <input type="checkbox"/>
LISTERIA <input type="checkbox"/>	T-PO4 <input type="checkbox"/> CN <input type="checkbox"/>	SLUDGE APPDX 007 <input type="checkbox"/>	SLUDGE APPDX 009 <input type="checkbox"/>
YEAST & MOLD <input type="checkbox"/>	Cl <input type="checkbox"/> MBAS <input type="checkbox"/>	008 <input type="checkbox"/>	
P. aeruginosa <input type="checkbox"/>	pH <input type="checkbox"/> T. HARD. <input type="checkbox"/>		

OTHER TESTS/INSTRUCTIONS

WATER - #1 - det.HC, PCB's

Soil - #2 - det.HC, PCB's, H/M #2B

SUBMITTED BY:

Robert F. Kuch

RELINQUISHED BY:

RECEIVED BY:

LI HARDY  
Gardner

RECEIVED BY:

FOR LAB USE ONLY: SAM RECP

MICRO

CHEM



74197





SCI LAB

**SCIENTIFIC LABORATORIES, INC.**

117 EAST 30TH STREET  
NEW YORK, NY 10016

TEL: (212) 679-8600 • FAX: (212) 679-9392

July 26, 2002

Garden State Laboratories, Inc.  
Attn: Diana Passmore  
410 Hillside Avenue  
Hillside, NJ 07205

RE: Garden State Laboratories, Inc.  
Job Number 202074102  
P.O. # Passmore

RECEIVED

AUG 13 2002

MODEH/WE

Dear Diana Passmore:

Enclosed are the results for PLM asbestos analysis of the following Garden State Laboratories, Inc. samples received at SCI LAB on Friday, July 26, 2002, for a 24 hour turnaround:

220724106, 220724107

The 2 samples contained in glass bottle were shipped to SciLab via Hand Delivered. These samples were prepared and analyzed according to the EPA Interim Method (EPA 600/M4-82-020 per 40 CFR 763, subpt F, App. A). The required analytical information, analysis results, analyst signature and laboratory identification is contained in the Analyst's Report.

This report relates ONLY to the sample analysis expressed as percent asbestos. SciLab assumes no responsibility for customer supplied data such as "sample type", "location", or "area sampled". This report must not be used to claim product endorsement by SciLab, NVLAP or any agency of the U. S. Government. The National Institute of Standards and Technology Accreditation requirements, mandates that this report must not be reproduced, except in full without the written approval of the laboratory. This report may contain specific data not covered by NVLAP or ELAP accreditations respectively, if so identified in relevant footnotes.

SciLab appreciates this opportunity to serve your organization. Please contact us for any further assistance or with any questions.

Sincerely,



Lance Tuckruskye  
QA/QC Compliance Officer

AUG 13 2002

# PLM Bulk Asbestos Report

MODEH/WP

Garden State Laboratories, Inc.  
Attn: Diana Passmore  
410 Hillside Avenue  
Hillside, NJ 07205

Date Received 07/26/2002 SciLab Job No. 202074102  
Date Examined 07/26/2002 P.O. # Passmore  
Page 1 of 1

RE:

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
220724106	202074102-01	Yes	24 %

Location: Bulk Material

Description: Grey, Homogeneous, Cementitious, Bulk Material  
Asbestos Types: Chrysotile 24. %  
Other Material: Non-fibrous 76. %

220724107	202074102-02	Yes	26 %
-----------	--------------	-----	------

Location: Bulk Material

Description: Grey, Homogeneous, Cementitious, Bulk Material  
Asbestos Types: Chrysotile 26. %  
Other Material: Non-fibrous 74. %

## Reporting Notes:

Analyzed by: Bella J. Chernis

\*NAD/NSD = no asbestos detected; NA = not analyzed; NA/PS = not analyzed / positive stop; PLM Bulk Asbestos Analysis by EPA 600/M4-82-020 per 40 CFR 763 (NVLAP Lab #200546-0) and ELAP PLM Analysis Protocol 198.1 for New York samples (NYSDOH ELAP Lab # 11480); Note: PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. TEM is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing in New York State (also see EPA Advisory for floor tile, FR 59, 146, 38970, 8/1/94). National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the laboratory. This PLM report relates ONLY to the items tested. AIHA# 102843; VT Cert#

AL016055

Reviewed By:

# GARDEN STATE LABORATORIES, INC.

Bacteriological and Chemical Testing

410 Hillside Avenue

Hillside, NJ 07205

MCDEH/WR

Telephone (908) 688-8900

Fax (908) 688-8966

## CHAIN OF CUSTODY RECORD

PRESS HARD - USE BALL POINT PEN

FOR LAB. USE ONLY

LAB #

RPT #

CLIENT #

CHG

NAME OF CLIENT GARDEN STATE LAB

ADDRESS 410 HILLSIDE AVE

DATE SUBMITTED 7/25/02

TIME SUBMITTED

CITY HILLSIDE

STATE NJ

ZIP 07205

CONTACT DIANA OR MIKE

TEL # ( )

SAMPLE(S) TYPE ASBESTOS FIBERS

SAMPLE(S) ID 220724106 & 220724107

SAMPLE LOCATION 10:20 AM (Bm) 12:30 PM 12:15 PM

220724102

DATE SAMPLED 7/23/02

TIME SAMPLED

PRESERVED

IF SAMPLE(S) CONTAIN HAZARDOUS SUBSTANCES, CHECK HERE ☐ AND SPECIFY

IF SAMPLE(S) REQUIRE SPECIAL QA/QC OR HANDLING, CHECK HERE ☐ AND SPECIFY

TESTS REQUESTED: ☐ ROUTINE (POTABLE WATER- T. COLI, S.P.C; NATURAL WATERS- F. COLI; FOODS-S.P.C., T. COLI, DM)

MICROBIOLOGY	WET CHEMISTRY	HEAVY METALS	ORGANICS
STD. PLATE COUNT <input type="checkbox"/>	SDWA 2° <input type="checkbox"/> CORROS. <input type="checkbox"/>	SDWA 1° <input type="checkbox"/> EP TOX <input type="checkbox"/>	VOA <input type="checkbox"/> A-280 <input type="checkbox"/>
TOTAL COLIFORM <input type="checkbox"/>	BOD <input type="checkbox"/> TSS <input type="checkbox"/>	PRIORITY <input type="checkbox"/>	THMs <input type="checkbox"/> PEST <input type="checkbox"/>
FECAL COLIFORM <input type="checkbox"/>	COD <input type="checkbox"/> TOC <input type="checkbox"/>	POLLUTANTS <input type="checkbox"/>	HERB <input type="checkbox"/> EP TOX <input type="checkbox"/>
FECAL STREP. <input type="checkbox"/>	PET HC <input type="checkbox"/> OIL/GR. <input type="checkbox"/>	LEAD <input type="checkbox"/> SODIUM <input type="checkbox"/>	BASE/NEUTRAL <input type="checkbox"/>
STAPH., C.P. <input type="checkbox"/>	TURB. <input type="checkbox"/> NO3-N <input type="checkbox"/>	IRON <input type="checkbox"/> MANG. <input type="checkbox"/>	ACID EXTRACTABLES <input type="checkbox"/>
SALMONELLA <input type="checkbox"/>	NO2-N <input type="checkbox"/> NH3-N <input type="checkbox"/>	COPPER <input type="checkbox"/> Cd <input type="checkbox"/>	PCBs <input type="checkbox"/>
SHIGELLA <input type="checkbox"/>	TKN <input type="checkbox"/> SO4 <input type="checkbox"/>	Cr <input type="checkbox"/> Zn <input type="checkbox"/>	ANALYSIS BY GC/MS <input type="checkbox"/>
LISTERIA <input type="checkbox"/>	T-PO4 <input type="checkbox"/> CN <input type="checkbox"/>	Al <input type="checkbox"/> ID #27 <input type="checkbox"/>	SLUDGE APPDX 009 <input type="checkbox"/>
YEAST & MOLD <input type="checkbox"/>	Cl <input type="checkbox"/> MBAS <input type="checkbox"/>	SLUDGE APPDX 007 <input type="checkbox"/>	
<i>P. aeruginosa</i> <input type="checkbox"/>	pH <input type="checkbox"/> T. HARD. <input type="checkbox"/>	008 <input type="checkbox"/>	

OTHER TESTS/INSTRUCTIONS ASBESTOS

SUBMITTED BY: [Signature]

RELINQUISHED BY:

RECEIVED BY: [Signature] 1130 7/24/02

RECEIVED BY:

FOR LAB USE ONLY: SAM RECP  
MICRO  
CHEM

# GARDEN STATE LABORATORIES, INC.

Bacteriological and Chemical Testing

410 Hillside Avenue

Hillside, NJ 07205

Telephone (908) 688-8900

Fax (908) 688-8966

## FOR LAB. USE ONLY

LAB #

RPT #

CLIENT #

CHG

## CHAIN OF CUSTODY RECORD

PRESS HARD - USE BALL POINT PEN

NAME OF CLIENT Middlesex County Health Dept.

ADDRESS 711 Jersey Avenue

DATE SUBMITTED 7/24/02

TIME SUBMITTED 3P

CITY New Brunswick

STATE NJ

ZIP 08901

CONTACT Richard Spilatore 732 745-8480 TEL # ( ) 745-8484

SAMPLE(S) TYPE Well Public Supply Surface Water Other X

SAMPLE(S) ID Case # 0100-1-(2) Bldg#426

SAMPLE LOCATION Memorial Park, Elm Street, South Plainfield

DATE SAMPLED 7/23/02 TIME SAMPLED \_\_\_\_\_ PRESERVED \_\_\_\_\_

IF SAMPLE(S) CONTAIN HAZARDOUS SUBSTANCES, CHECK HERE ☐ AND SPECIFY \_\_\_\_\_

IF SAMPLE(S) REQUIRE SPECIAL QA/QC OR HANDLING, CHECK HERE ☐ AND SPECIFY \_\_\_\_\_

TESTS REQUESTED: ☐ ROUTINE (POTABLE WATER- T. COLI, S.P.C: NATURAL WATERS- F. COLI:

FOODS-S.P.C., T. COLI, DM)

MICROBIOLOGY	WET CHEMISTRY	HEAVY METALS	ORGANICS
STD. PLATE COUNT <input type="checkbox"/>	SDWA 2° <input type="checkbox"/> CORROS. <input type="checkbox"/>	SDWA 1° <input type="checkbox"/> EP TOX <input type="checkbox"/>	VOA <input type="checkbox"/> A-280 <input type="checkbox"/>
TOTAL COLIFORM <input type="checkbox"/>	BOD <input type="checkbox"/> TSS <input type="checkbox"/>	PRIORITY <input type="checkbox"/>	THMs <input type="checkbox"/> PEST <input type="checkbox"/>
FECAL COLIFORM <input type="checkbox"/>	COD <input type="checkbox"/> TOC <input type="checkbox"/>	POLLUTANTS <input type="checkbox"/>	HERB <input type="checkbox"/> EP TOX <input type="checkbox"/>
FECAL STREP. <input type="checkbox"/>	PET HC <input type="checkbox"/> OIL/GR. <input type="checkbox"/>	LEAD <input type="checkbox"/> SODIUM <input type="checkbox"/>	BASE/NEUTRAL <input type="checkbox"/>
STAPH., C.P. <input type="checkbox"/>	TURB. <input type="checkbox"/> NO3-N <input type="checkbox"/>	IRON <input type="checkbox"/> MANG. <input type="checkbox"/>	ACID EXTRACTABLES <input type="checkbox"/>
SALMONELLA <input type="checkbox"/>	NO2-N <input type="checkbox"/> NH3-N <input type="checkbox"/>	COPPER <input type="checkbox"/> Cd <input type="checkbox"/>	PCBs <input type="checkbox"/>
SHIGELLA <input type="checkbox"/>	TKN <input type="checkbox"/> SO4 <input type="checkbox"/>	Cr <input type="checkbox"/> Zn <input type="checkbox"/>	ANALYSIS BY GC/MS <input type="checkbox"/>
LISTERIA <input type="checkbox"/>	T-PO4 <input type="checkbox"/> CN <input type="checkbox"/>	Al <input type="checkbox"/> ID #27 <input type="checkbox"/>	SLUDGE APPDX 009 <input type="checkbox"/>
YEAST & MOLD <input type="checkbox"/>	CI <input type="checkbox"/> MBAS <input type="checkbox"/>	SLUDGE APPDX 007 <input type="checkbox"/>	
<i>P. aeruginosa</i> <input type="checkbox"/>	pH <input type="checkbox"/> T. HARD. <input type="checkbox"/>	SLUDGE APPDX 008 <input type="checkbox"/>	

OTHER TESTS/INSTRUCTIONS Asbestos Fibers

SUBMITTED BY: [Signature]

RELINQUISHED BY: \_\_\_\_\_

RECEIVED BY: [Signature]

RECEIVED BY: \_\_\_\_\_

FOR LAB USE ONLY: SAM RECP

MICRO

CHEM

# GARDEN STATE LABORATORIES, INC.

Bacteriological and Chemical Testing

410 Hillside Avenue

Hillside, NJ 07205

Telephone (908) 688-8900

Fax (908) 688-8966

FOR LAB. USE ONLY

LAB #

RPT #

CLIENT #

CHG

## CHAIN OF CUSTODY RECORD

PRESS HARD - USE BALL POINT PEN

NAME OF CLIENT Middlesex County Health Dept.

ADDRESS 711 Jersey Avenue

DATE SUBMITTED 7-17-02

TIME SUBMITTED 240P

CITY New Brunswick STATE NJ ZIP 08901

CONTACT Richard Spilatore 732 745-8480 TEL # ( 745-8484

SAMPLE(S) TYPE Well Public Supply Surface Water & Other Soil

SAMPLE(S) ID Case # 0100-41-2 B107426

SAMPLE LOCATION Memorial Park, Elm St., South Plainfield

DATE SAMPLED 7-17-02 TIME SAMPLED 9:45AM PRESERVED Yes

IF SAMPLE(S) CONTAIN HAZARDOUS SUBSTANCES, CHECK HERE ☐ AND SPECIFY

IF SAMPLE(S) REQUIRE SPECIAL QA/QC OR HANDLING, CHECK HERE ☐ AND SPECIFY

TESTS REQUESTED: ☐ ROUTINE (POTABLE WATER- T. COLI, S.P.C. NATURAL WATERS- F. COLI:

FOODS-S.P.C., T. COLI, DM)

MICROBIOLOGY	WET CHEMISTRY	HEAVY METALS	ORGANICS
STD. PLATE COUNT <input type="checkbox"/>	SDWA 2° <input type="checkbox"/> CORROS. <input type="checkbox"/>	SDWA 1° <input type="checkbox"/> EP TOX <input type="checkbox"/>	VOA <input type="checkbox"/> A-280 <input type="checkbox"/>
TOTAL COLIFORM <input type="checkbox"/>	BOD <input type="checkbox"/> TSS <input type="checkbox"/>	PRIORITY <input type="checkbox"/>	THMs <input type="checkbox"/> PEST <input type="checkbox"/>
FECAL COLIFORM <input type="checkbox"/>	COD <input type="checkbox"/> TOC <input type="checkbox"/>	POLLUTANTS <input type="checkbox"/>	HERB <input type="checkbox"/> EP TOX <input type="checkbox"/>
FECAL STREP. <input type="checkbox"/>	PET HC <input checked="" type="checkbox"/> OIL/GR. <input type="checkbox"/>	LEAD <input type="checkbox"/> SODIUM <input type="checkbox"/>	BASE/NEUTRAL <input type="checkbox"/>
STAPH., C.P. <input type="checkbox"/>	TURB. <input type="checkbox"/> NO3-N <input type="checkbox"/>	IRON <input type="checkbox"/> MANG. <input type="checkbox"/>	ACID EXTRACTABLES <input type="checkbox"/>
SALMONELLA <input type="checkbox"/>	NO2-N <input type="checkbox"/> NH3-N <input type="checkbox"/>	COPPER <input type="checkbox"/> Cd <input type="checkbox"/>	PCBs <input checked="" type="checkbox"/>
SHIGELLA <input type="checkbox"/>	TKN <input type="checkbox"/> SO4 <input type="checkbox"/>	Cr <input type="checkbox"/> Zn <input type="checkbox"/>	ANALYSIS BY GC/MS <input type="checkbox"/>
LISTERIA <input type="checkbox"/>	T-PO4 <input type="checkbox"/> CN <input type="checkbox"/>	Al <input type="checkbox"/> ID #27 <input type="checkbox"/>	SLUDGE APPDX 009 <input type="checkbox"/>
YEAST & MOLD <input type="checkbox"/>	Cl <input type="checkbox"/> MBAS <input type="checkbox"/>	SLUDGE APPDX 007 <input type="checkbox"/>	
<i>P. aeruginosa</i> <input type="checkbox"/>	pH <input type="checkbox"/> T. HARD. <input type="checkbox"/>	SLUDGE APPDX 008 <input type="checkbox"/>	

OTHER TESTS/INSTRUCTIONS WATER - #1 - det.HC, PCR's

(CRUSH) \* Soil - #2 - det.HC, PCR's, HM#8B

SUBMITTED BY: Richard F. Kish

RELINQUISHED BY: \_\_\_\_\_

RECEIVED BY: LI HARDY

RECEIVED BY: \_\_\_\_\_

FOR LAB USE ONLY: SAM RECP

MICRO

CHEM





## **APPENDIX C**

**NJDEP LETTER  
DATE AUGUST 6, 2002**



State of New Jersey

James E. McGreevey  
Governor

Department of Environmental Protection  
Division of Remediation Management and Response  
Bureau of Southern Field Operations  
P.O. Box 407  
Trenton, New Jersey 08625-0407  
(609) 584-4150  
(609) 584-4170 - Fax

Bradley M. Campbell  
Commissioner

August 6, 2002

Devang Patel  
PMK Group  
PO Box 5000  
Cranford, NJ 07016

Re: Veterans Memorial Field - Preliminary Assessment and Site Investigation Reports  
Remedial Investigation Workplan Received August 1, 2002  
Church St & Kaine Avenue; Block 260, Lot 15.02  
South Plainfield, Middlesex County  
Case #01-08-07-1845-23 File #12-22-78

Dear Mr. Patel:

A review of the above referenced reports has been completed by this office. The Preliminary Assessment identified a number of areas of concern (AOC), several of which were subsequently sampled. The investigation was later expanded to include investigation of asbestos containing material found exposed beyond the boundary of the original study area. As requested by you on July 30, 2002, comments generated by review of the PA/SI were withheld pending receipt and review of a Remedial Investigation Workplan and revised site map. As review of all submittals received thus far is now complete; comments and questions regarding the PA, SI and RIW are as follows:

***AOC 1 - Historic Fill***

Prior to the mid 1950s, the 8.58 acre property consisted of low lying, "swampy" wetland areas. The property was reportedly filled to allow for usage of the site by the municipality. The site was utilized as a baseball field as early as 1954. Additional information is required. Please provide the specific names and dates of ownership for all current and past owners of the site. Additional detail regarding the filling of the property is also necessary. From where was the fill received? Was the site used as the Public Works landfill, or as a municipal landfill? How was it made known to potential sources of fill material the municipality was requesting same? If this information is not known, what attempts were made to obtain said information?

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Recycled Paper

Additionally, although Appendix D included copies of aerial photographs as well as an interpretation of same, they were provided only from 1954 onward. Pursuant to the Technical Requirements, the photographic history shall date back to 1932 or the earliest photograph available. Aerial photographs are maintained and available for review at the NJDEP Tidelands Management Program Aerial Photo Library for the entire state, back to 1937. A review of same may provide information regarding fill activities.

Pursuant to the Technical Requirements for Site Remediation, specifically N.J.A.C. 7:26E-3.12 and 4.6(b), additional characterization of the historic fill is necessary. The vertical and horizontal (to the property boundary) extent of the fill must be established. It currently appears the entire site may consist of historic fill. The proposal for investigation of the historic fill area is conditionally approved, pending compliance with the following caveats. The RIW proposes the excavation of test pits to a depth of approximately 6-8'. Please be advised the depth of each test pit must be to native soil. Sampling has been proposed at a rate of two samples per acre. N.J.A.C. 7:26E-4.6(b)3, however, requires at least four samples per acre, per fill type. PP+40 and asbestos analysis are *not* required on all samples. Analytical parameters are to be determined based upon fill type encountered (N.J.A.C. 7:26E-4.6(b)3iii(1) through (4). Asbestos analysis is required only for those samples containing suspect ACM. Existing analytical data, generated via sampling conducted in accordance with the appropriate criteria, may be incorporated into and utilized in characterization of the historic fill.

#### ***AOC 2 - Electrical Transformers***

A single pole mounted transformer is located onsite. No staining or other evidence of a discharge was noted. No sampling was required or performed. No further action is required at this area of concern.

#### ***AOC 3 - Areas of Stressed Vegetation***

Several areas of stressed vegetation are reported throughout the northern and central portions of the site. A single soil sample was collected, from the stressed area on the northwest side of the site, from a depth of 12-18", which appears to be the depth the sandy soil was stained. Although this depth was appropriately selected for sampling due to the staining, the soil type noted would indicate a second sample from that boring location should have been collected as per N.J.A.C. 7:26E-3.6(a)4i(5).

Analytical findings are narratively reported as indicating exceedences of the pesticides 4,4-DDD and 4,4-DDE, as well as an elevated level of arsenic. Although the analytical data confirm the presence of an elevated level of arsenic (148 ppm), the pesticides data appear to indicate the presence of 4,4-DDD and 4,4-DDE at 15 ppb and 12 ppb, below their respective criteria of 3 ppm and 2 ppm. It is agreed delineation of the arsenic is necessary. The additional areas of stressed vegetation may be utilized in biasing the sampling required for the historic fill characterization.

#### ***AOC 4 - Areas which receive flood or storm water from potentially contaminated areas***

The entire site is apparently located within the 100 year flood zone, and concern has been expressed by PMK the site may have been impacted by runoff/flood waters from one of the three upgradient contaminated sites. The PA recommended further investigation to identify potential impacts to the site from offsite sources, but did not elaborate as to what that investigation would consist of. Nor was evidence thus far submitted which would indicate contamination from an upgradient source was expected.

#### ***AOC 5 - Black Ooze Emanating from Ground***

A black tar-like substance was found emanating from the ground at two locations within the property. Sampling of the soil in the general vicinity of the tar-like substance has indicated the presence of 2.2 ppm PCBs and 4.4 ppm beryllium at 2-2.5' at one location, and elevated levels of base neutrals and beryllium at 1-1.5' at another. Sampling of the tar-like material has not yet determined its exact identity, but has indicated the material is not a petroleum distillate product or coal tar.

Interim remedial measures have recently been conducted to isolate the material. Several inches of soil have been placed onto the areas from which the tar-like substance was emanating, and the areas surrounded with snow fencing. The park has also been temporarily closed, and a 6' chain link security fence installed and posted. Delineation via the installation of backhoe test pits (see AOC 1 Historic Fill for additional comments) of the tar-like substance is expected to commence August 7, 2002.

#### ***AOC 6 - Sink Hole Areas***

A depressed area was reported near the center of the northern study area/property boundary. A soil sample was collected from 4.5-5', the depth at which the highest PID reading was noted, and analysed for PP+40. No exceedences of the cleanup criteria were noted. The recommendation for further investigation of the area via the installation of test pits, however, is appropriate, and is considered an element of the required historic fill characterization.

#### ***AOC 7 - Discolored or Spill Areas***

Two areas of discoloration were noted along the center portion of the western property boundary of the study area. The first, consisting of blue staining, was determined to be the remains of a melted blue plastic drum, used throughout the site/park as trash cans. The second, consisting of a black powder like substance, was found to be ash generated by a charcoal barbecue grill in the nearby picnic area. The sample collected at location

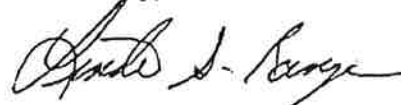
B-4, from a depth of 3.5-4' and analysed for PP+40, found detectable levels of base neutrals, PCBs and PP Metals. No exceedences of the most stringent cleanup criteria, however, were noted. No additional investigation is required in this area other than the site wide historic fill characterization.

***AOC 8 - Asbestos Containing Material in Wetlands Area***

Although not within the original study area, the investigation has been expanded to include a recently noted area of material exposed along the bank of the wetlands area, west of the original study area boundary. Sampling has confirmed the material contains Chrysotile. The material is partially exposed, but is not friable at this time. At present, the extent and quantity of the asbestos containing material is unknown. Investigation, however, is to continue via delineation by test pits, and a remedy subsequently selected. See AOC 1 Historic Fill for additional comments.

If you have any questions, please contact this office.

Sincerely,



Linda S. Range

C: James Vokral, Borough of South Plainfield, Municipal Building, 2480 Plainfield Ave, So Plainfield, NJ 07080  
Tom Sakorski, Middlesex County Health Department  
William Dunfee  
File #12-22-78

Page 111 of 111

## **APPENDIX D**

### **ASBESTOS LABORATORY CERTIFICATE**





SHEET No. 1 of 1

BY: Emre 8:58 AM

**EMSL Analytical, Inc.**

1056 Stelton Road, Piscataway, NJ 08854

Phone: 732-981-0550 Fax: 7329810551 Email: [piscatawaylab@emsl.com](mailto:piscatawaylab@emsl.com)**EMSL**Attn: Kevin Burns  
PMK, Ferris & Perricone, Inc  
65 Jackson Drive  
Cranford, NJ 07016

Fax: (908) 497-9134 Phone: 908-497-8900

Project: 0502014 / Veterans Memorial Park

Customer ID: PMK50

Customer PO:

Received: 07/24/02 8:50 AM

EMSL Order: 050203039

EMSL Project ID:

Analysis Date: 7/24/02

**Asbestos Analysis of Bulk Materials by PLM via the NY State ELAP 198.1 Method**

Sample	Location	Appearance	Treatment	Non-Asbestos		Asbestos
				% Fibrous	% Non-Fibrous	% Type
0502014-01 050203039-0001		Gray/Tan Fibrous Heterogeneous	Teased Crushed	10.0% Cellulose	83.70% Non-fibrous (other)	6.30% Chrysotile
0502014-02 050203039-0002		Tan Fibrous Heterogeneous	Teased Crushed	13.0% Cellulose	80.30% Non-fibrous (other)	6.70% Chrysotile
0502014-03 050203039-0003		Brown Fibrous Heterogeneous	Teased Crushed	15.0% Cellulose	80.60% Non-fibrous (other)	4.40% Chrysotile
0502014-04 050203039-0004		Brown/Black Fibrous Heterogeneous	Crushed Ashed Dissolved	5.0% Cellulose	95.00% Non-fibrous (other)	None Detected

Reprint 7/24/02

Maurice Carchman

Analyst

Adrian Arav  
or other approved signatory

PLM has been known to miss asbestos in a small percentage of samples which contain asbestos. Negative PLM results cannot be guaranteed. Samples reported as <1% or none detected should be tested with TEM. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. The above test must not be used by the client to claim product endorsement by NVLAP nor any agency of the United States Government.

Analysis performed by EMSL Piscataway (NY State ELAP #11423; NVLAP #101048-2; Connecticut DOH PH-0266 Approved Env. Lab)

PLM Point Count-1

CLIENT: SOUTH PLAINFIELD

PROJECT NO: 0502014

PROJECT: VETERANS MEMORIAL PARK

DATE: 7/23/02

TO: EMSL

**HEREIN FIND THE FOLLOWING SAMPLES:**

- ☒ Bulk Samples  
☐ Cellulose Ester Filter Cassette  
☐ Paint Chip Samples  
☐ Other:

**SAMPLE #**

0502014 - 072302 - 01 → 04

Ⓢ EWSH TURNAROUND (ASAP THIS AM)

**TO BE ANALYZED FOR ASBESTOS CONTENT BY THE FOLLOWING METHOD:**

- ☒ Polarized Light Microscopy With Dispersion Staining  
☐ Phase Contrast Microscopy ( ) NIOSH 7400  
☐ Scanning Electron Microscopy  
    ( ) Dust Sample ( ) Fiber Count  
    ( ) Analytic Energy Dispersive X-Ray  
☐ Transmission Electron Microscopy  
    ( ) Screening Analysis (Fiber Count)  
    ( ) Quantative (Local Area Diffraction)  
    ( ) AHERA Protocol  
☐ LEAD Content analysis (percentage)  
☒ Other: ELAP PROTOCOL (NO TEM)

**REPORT RESULTS TO THE PMK GROUP AND TAKE THE FOLLOWING ACTION WITH SAMPLES:**

- ☐ Return to the PMK Group Inc. - Use transmittal.  
☐ Retain until notified otherwise. ( ) Retain Indefinitely  
☐ Dispose Of.

**CHAIN OF CUSTODY:** If Enclosures are not as noted, please inform us immediately.

PMK Packaged By: (CSB)

Date: 7/23/02

Transmitted By: (CSB)

Date: 1

Method of Transmittal: HAND DELIVER

Date: 1

**LABORATORY:**

Received By Lab ( ) Sealed Box

( ) Damaged and Inventoried

Handled By: \_\_\_\_\_

Date: \_\_\_\_\_

Sample Preparation: \_\_\_\_\_

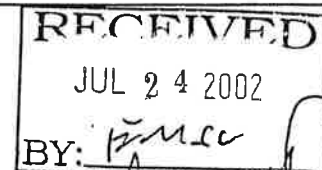
Date: \_\_\_\_\_

Sample Analysis: \_\_\_\_\_

Date: \_\_\_\_\_

Packaged By: \_\_\_\_\_

Date: \_\_\_\_\_



8:50 AM

**SCIENTIFIC LABORATORIES, INC.**

117 EAST 30TH STREET

NEW YORK, NY 10016

TEL: (212) 679-8600 • FAX: (212) 679-9392

**PLM Bulk Asbestos Report**

PMK Group  
Attn: Robert Kingsbury  
65 Jackson Drive  
PO Box 5000  
Cranford, NJ 07016

Date Received 08/13/2002 SciLab Job No. 202082506

Date Examined 08/15/2002 P.O. # 0502014

Page 1 of 3

RE: 0502014; Borough Of South Plainfield; Veterans  
Memorial Park

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
0502014-080902-01	202082506-01	Yes	15 %

Location: Test Pit (TP) - 28

Description: Tan, Homogeneous, Cementitious Panel  
Asbestos Types: Chrysotile 15. %  
Other Material: Cellulose Trace, Non-fibrous 85. %

0502014-080902-02	202082506-02	Yes	18 %
-------------------	--------------	-----	------

Location: TP-1

Description: White, Homogeneous, Matric Block Debris  
Asbestos Types: Chrysotile 18. %  
Other Material: Cellulose Trace, Non-fibrous 82. %

0502014-080902-03	202082506-03	Yes	15 %
-------------------	--------------	-----	------

Location: TP-1

Description: Tan, Homogeneous, Cementitious Panel  
Asbestos Types: Chrysotile 15. %  
Other Material: Cellulose Trace, Non-fibrous 85. %

0502014-080902-04	202082506-04	Yes	15 %
-------------------	--------------	-----	------

Location: TP-2

Description: Tan, Homogeneous, Cementitious Panel  
Asbestos Types: Chrysotile 15. %  
Other Material: Cellulose Trace, Non-fibrous 85. %

0502014-080902-05	202082506-05	Yes	18 %
-------------------	--------------	-----	------

Location: TP-2

Description: White, Homogeneous, Cementitious Panel  
Asbestos Types: Chrysotile 18. %  
Other Material: Cellulose Trace, Non-fibrous 82. %

**SCIENTIFIC LABORATORIES, INC.**

117 EAST 30TH STREET

NEW YORK, NY 10016

TEL: (212) 679-8600 • FAX: (212) 679-9392

**PLM Bulk Asbestos Report**

PMK Group  
Attn: Robert Kingsbury  
65 Jackson Drive  
PO Box 5000  
Cranford, NJ 07016

Date Received 08/13/2002 SciLab Job No. 202082506

Date Examined 08/15/2002 P.O. # 0502014

Page 2 of 3

RE: 0502014; Borough Of South Plainfield; Veterans  
Memorial Park

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
0502014-080902-06	202082506-06	No	NAD <sup>1</sup>

Location: TP-6

Description: Black, Homogeneous, Asphaltic Compound

Asbestos Types:

Other Material: Non-fibrous 0.7 %

0502014-080902-07	202082506-07	Yes	12 %
-------------------	--------------	-----	------

Location: TP-6

Description: Beige, Homogeneous, Fibrous Debris

Asbestos Types: Chrysotile 12. %

Other Material: Cellulose Trace, Non-fibrous 88. %

0502014-080902-08	202082506-08	Yes	10 %
-------------------	--------------	-----	------

Location: TP-23

Description: White, Homogeneous, Fibrous Debris

Asbestos Types: Chrysotile 10. %

Other Material: Cellulose Trace, Non-fibrous 90. %

0502014-080902-09	202082506-09	Yes	15 %
-------------------	--------------	-----	------

Location: TP-24

Description: White, Homogeneous, Fibrous Debris

Asbestos Types: Chrysotile 15. %

Other Material: Cellulose 2. %, Fibrous glass 5. %, Non-fibrous 78. %

**SCIENTIFIC LABORATORIES, INC.**

117 EAST 30TH STREET

NEW YORK, NY 10016

TEL: (212) 679-8600 • FAX: (212) 679-9392

**PLM Bulk Asbestos Report**

PMK Group  
Attn: Robert Kingsbury  
65 Jackson Drive  
PO Box 5000  
Cranford, NJ 07016

Date Received 08/13/2002 SciLab Job No. 202082506

Date Examined 08/15/2002 P.O. # 0502014

Page 3 of 3

RE: 0502014; Borough Of South Plainfield; Veterans  
Memorial Park

**Reporting Notes:**

- (1) PLM analysis of NOB inert material.

Analyzed by: Ivan H. Recalde

\*NAD/NSD = no asbestos detected; NA = not analyzed; NA/PS = not analyzed / positive stop; PLM Bulk Asbestos Analysis by EPA 600/M4-82-020 per 40 CFR 763 (NVLAP Lab #200546-0) and ELAP PLM Analysis Protocol 198.1 for New York samples (NYSDOH ELAP Lab # 11480); Note: PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. TEM is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing in New York State (also see EPA Advisory for floor tile, FR 59, 146, 38970, 8/1/94). National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the laboratory. This PLM report relates ONLY to the items tested. AIHA# 102843; VT Cert# AL016055

Reviewed By: \_\_\_\_\_



## ASBESTOS LABORATORY WORK ORDER/CHAIN OF CUSTODY

DATE: 08/12/02

In accordance with the Subcontractor Analytical Services Agreement between \_\_\_\_\_ (Subcontractor), and PMK Group, Inc. (PMK), dated \_\_\_\_\_, this Work Order describes the Scope of Services, Time Schedule, Charges and Payment Conditions for the Project described below.

CLIENT:

Borough of South Plainfield

PROJECT #.:

0502014

PROJECT NAME

Veterans Memorial Park

WORK ORDER #

## HEREIN FIND THE FOLLOWING SAMPLES:

- ☒ Bulk Samples  
☐ Air Sample Cassettes - ☐ PCM ☐ TEM  
☐ Paint Chip Samples  
☐ Other

## SAMPLE NOS.

0502014 - 080902 -#01 - #09

## TURNAROUND TIME:

- ☐ Rush ☐ 6 Hours ☐ 12 Hours ☐ 24 Hours ☐ 48 Hours ☒ Other 3 day TAT

## TO BE ANALYZED FOR ASBESTOS CONTENT BY THE FOLLOWING METHOD:

- ☐ Polarized Light Microscopy with Dispersion Staining  
☒ ELAP Protocol, TEM ☒ Yes ☐ No  
☐ Lead content analysis (percentage)  
☐ Phase Contrast Microscopy  
☐ Transmission Electron Microscopy  
☐ Screening Analysis (Fiber Count)  
☐ Quantitative (Local Area Diffraction)  
☐ AHERA Protocol  
☐ Other

## REPORTING:

Report Initial results to:

Stanley Lewandowski

Send final report to: Stanley Lewandowski

## TAKE THE FOLLOWING ACTION WITH SAMPLES:

- ☐ Return to the PMK Group - Use Transmittal  
☐ Retain Indefinitely ☒ Retain until notified otherwise  
☐ Dispose of.

## CHAIN OF CUSTODY:

If enclosures are not as noted, please inform us immediately.

PMK Packaged by:

Janette Csatori

Date:

08/12/02

Transmitted by:

UPS

Date:

Method of Transmittal:

"

Date:

↓

## LABORATORY:

Received by Lab: ☐Sealed Package ☐☐

Damaged and Inventoried

Handled by:

Leana

Date:

8/13/02

Sample Preparation:

Date:

Sample Analysis:

Date:

Packaged by:

Date:





**EMSL Analytical, Inc.**

1056 Stelton Road, Piscataway, NJ 08854

Phone: 732-981-0550 Fax: 732-981-0551 Email: [piscatawaylab@emsl.com](mailto:piscatawaylab@emsl.com)**EMSL**Attn: Kevin Burns  
PMK, Ferris & Perricone, Inc  
65 Jackson Drive  
Cranford, NJ 07016Fax: (908) 497-9134 Phone: 908-497-8900  
Project: 0502014 / Veterans Memorial Park

Customer ID: PMK50

Customer PO:

Received: 07/24/02 8:50 AM

EMSL Order: 050203039

EMSL Project ID:

Analysis Date: 7/24/02

**Asbestos Analysis of Bulk Materials by PLM via the NY State ELAP 198.1 Method**

Sample	Location	Appearance	Treatment	Non-Asbestos		Asbestos
				% Fibrous	% Non-Fibrous	% Type
0502014-01 050203039-0001		Gray/Tan Fibrous Heterogeneous	Teased Crushed	10.0% Cellulose	83.70% Non-fibrous (other)	6.30% Chrysotile
0502014-02 050203039-0002		Tan Fibrous Heterogeneous	Teased Crushed	13.0% Cellulose	80.30% Non-fibrous (other)	6.70% Chrysotile
0502014-03 050203039-0003		Brown Fibrous Heterogeneous	Teased Crushed	15.0% Cellulose	80.60% Non-fibrous (other)	4.40% Chrysotile
0502014-04 050203039-0004		Brown/Black Fibrous Heterogeneous	Crushed Ashed Dissolved	5.0% Cellulose	95.00% Non-fibrous (other)	None Detected

Reprint 7/24/02

Maurice Carchman

Analyst

Adrian Arav  
or other approved signatory

PLM has been known to miss asbestos in a small percentage of samples which contain asbestos. Negative PLM results cannot be guaranteed. Samples reported as <1% or none detected should be tested with TEM. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. The above test must not be used by the client to claim product endorsement by NVLAP nor any agency of the United States Government.

Analysis performed by EMSL Piscataway (NY State ELAP #11423; NVLAP #101048-2, Connecticut DOH PH-0266 Approved Env. Lab)

PLM Point Count-1

1



050203038  
SAMPLE TRANSMITTAL

CLIENT: SOUTH PLAINFIELD

PROJECT NO: 0502014

PROJECT: VETERANS MEMORIAL PARK

DATE: 7/23/02

TO: EMSL

**HEREIN FIND THE FOLLOWING SAMPLES:**

- ☒ Bulk Samples  
☐ Cellulose Ester Filter Cassette  
☐ Paint Chip Samples  
☐ Other:

**SAMPLE #**

0502014 - 072302 - 01 → 04  
Ⓢ EUSH TURNAROUND (ASAP THIS AM)

**TO BE ANALYZED FOR ASBESTOS CONTENT BY THE FOLLOWING METHOD:**

- ☒ Polarized Light Microscopy With Dispersion Staining  
☐ Phase Contrast Microscopy ( ) NIOSH 7400  
☐ Scanning Electron Microscopy  
    ( ) Dust Sample ( ) Fiber Count  
    ( ) Analytic Energy Dispersive X-Ray  
☐ Transmission Electron Microscopy  
    ( ) Screening Analysis (Fiber Count)  
    ( ) Quantative (Local Area Diffraction)  
    ( ) AHERA Protocol  
☐ LEAD Content analysis (percentage)  
☒ Other: ELAP PROTOCOL (NO TEM)

**REPORT RESULTS TO THE PMK GROUP AND TAKE THE FOLLOWING ACTION WITH SAMPLES:**

- ☐ Return to the PMK Group Inc. - Use transmittal.  
☐ Retain until notified otherwise. ( ) Retain Indefinitely  
☐ Dispose Of.

**CHAIN OF CUSTODY:** If Enclosures are not as noted, please inform us immediately.

PMK Packaged By: (CS)

Date: 7/23/02

Transmitted By: (CS)

Date: ↓

Method of Transmittal: HAND DELIVER

Date: ↓

**LABORATORY:**

Received By Lab ( ) Sealed Box

( ) Damaged and Inventoried

Handled By: \_\_\_\_\_

Date: \_\_\_\_\_

Sample Preparation: \_\_\_\_\_

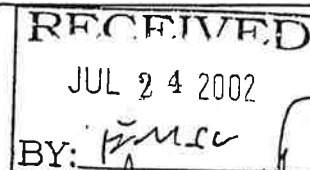
Date: \_\_\_\_\_

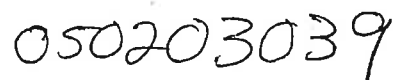
Sample Analysis: \_\_\_\_\_

Date: \_\_\_\_\_

Packaged By: \_\_\_\_\_

Date: \_\_\_\_\_





SHEET No. 1 of 1

BY: [Signature] 8.5.2011



# ASBESTOS LABORATORY WORK ORDER/CHAIN OF CUSTODY

DATE: 08/12/02

In accordance with the Subcontractor Analytical Services Agreement between \_\_\_\_\_ (Subcontractor), and PMK Group, Inc. (PMK), dated \_\_\_\_\_, this Work Order describes the Scope of Services, Time Schedule, Charges and Payment Conditions for the Project described below.

CLIENT: Borough of South Plainfield PROJECT #: 0502014  
PROJECT NAME: Veterans Memorial Park WORK ORDER #: \_\_\_\_\_

## HEREIN FIND THE FOLLOWING SAMPLES:

- ☒ Bulk Samples  
☐ Air Sample Cassettes - ☐ PCM ☐ TEM  
☐ Paint Chip Samples  
☐ Other

## SAMPLE NOS.

0502014 - 080902 -  
#01 - #09

## TURNAROUND TIME:

- ☐ Rush ☐ 6 Hours ☐ 12 Hours ☐ 24 Hours ☐ 48 Hours ☒ Other 3 day TAT

## TO BE ANALYZED FOR ASBESTOS CONTENT BY THE FOLLOWING METHOD:

- ☐ Polarized Light Microscopy with Dispersion Staining ☐ Phase Contrast Microscopy  
☒ ELAP Protocol, TEM ☒ Yes ☐ No ☐ Transmission Electron Microscopy  
☐ Lead content analysis (percentage) ☐ Screening Analysis (Fiber Count)  
☐ AHERA Protocol

☐ Other \_\_\_\_\_

## REPORTING:

Report initial results to: Stanley Lewandowski

Send final report to: Stanley Lewandowski

## TAKE THE FOLLOWING ACTION WITH SAMPLES:

- ☐ Return to the PMK Group - Use Transmittal ☒ Retain until notified otherwise  
☐ Retain indefinitely ☐ Dispose of.

## CHAIN OF CUSTODY:

If enclosures are not as noted, please inform us immediately.

PMK Packaged by: Janette Csatori  
Transmitted by: UPS  
Method of Transmittal: "

Date: 08/12/02  
Date: ↓  
Date: ↓

## LABORATORY:

Received by Lab: ☐ Sealed Package ☐ Damaged and inventoried

Handled by: \_\_\_\_\_  
Sample Preparation: \_\_\_\_\_  
Sample Analysis: \_\_\_\_\_  
Packaged by: \_\_\_\_\_

Date: \_\_\_\_\_  
Date: \_\_\_\_\_  
Date: \_\_\_\_\_  
Date: \_\_\_\_\_

Note: See plates for test pit locations

Chrysotile = Chrysotile Asbestos

Amosite = Amosite Asbestos

ND = No Asbestos detected in samples

Date - 08/09/02

Client - Borough of So. Plainfield

Project - Veterans Memorial Park

Project # - 0502014

[illegible]

SCILAB

Please Reply To:

**SCIENTIFIC LABORATORIES, INC.**117 EAST 30TH STREET  
NEW YORK, NY 10016

TEL: (212) 679-8600 • FAX: (212) 679-9392

**FACSIMILE TELECOPY TRANSMISSION**To: Robert Kingsbury  
PMK Group  
Fax #: (908)497-9134From: Ivan H. Recalde  
SCILAB Job#: 202082506  
Subject: ELAP-PLM/TEM 3 day Results  
Client Project: 0502014: Borough Of South  
Plainfield: Veterans Memorial ParkDate: Thursday, August 15, 2002Time: 19:35:52

Comments:

Number of Pages: 6  
(including cover sheet)

8/19

JD-C:

They have plates & books back  
in central file. - for

CONFIDENTIALITY NOTICE: Unless otherwise indicated, the information contained in this facsimile communication is confidential information intended for use of the individual named above. If the reader of this communication is not the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is prohibited. If you have received this communication in error, please immediately notify the sender by telephone and return the original message to the above address via the US Postal Service at our expense. Preliminary data reported here will be verified before final report is issued. Samples are disposed of in 60 days or unless otherwise instructed by the protocol or special instructions in writing. Thank you.

**THE SCILAB GROUP OF LABORATORIES**

Certified Analysis Service 24 Hours A Day • 7 Days A Week Competitive Prices

visit our web site • [www.scilabs.com](http://www.scilabs.com)**SCIENTIFIC  
LABORATORIES, INC.**  
117 EAST 30TH STREET  
NEW YORK, NY 10016  
TEL: (212) 679-8600  
FAX: (212) 679-9392**SCILAB  
CALIFORNIA, INC.**  
24416 SOUTH MAIN ST.  
CARSON, CA 90745  
TEL: (310) 834-4868  
FAX: (310) 834-4772**SCILAB  
BOSTON, INC.**  
8 SCHOOL STREET  
WEYMOUTH, MA 02188  
TEL: (781) 937-9334  
FAX: (781) 337-7642**SCIENTIFIC  
LABORATORIES, INC.**  
13635 GENITO ROAD  
MIDLOTHIAN, VA 23112  
TEL: (804) 763-1200  
FAX: (804) 763-1800

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**SCIENTIFIC LABORATORIES, INC.**117 EAST 30TH STREET  
NEW YORK, NY 10016

TEL: (212) 679-8600 • FAX: (212) 679-9392

**PLM Bulk Asbestos Report**PMK Group  
Attn: Robert Kingsbury  
65 Jackson Drive  
PO Box 5000  
Cranford, NJ 07016**Date Received** 08/13/2002 **SciLab Job No.** 202082506**Date Examined** 08/15/2002 **P.O. #** 0502014**Page** 1 of 3**RE:** 0502014; Borough Of South Plainfield; Veterans  
Memorial Park

<b>Client No. / HGA</b>	<b>Lab No.</b>	<b>Asbestos Present</b>	<b>Total % Asbestos</b>
0502014-080902-01	202082506-01	<b>Yes</b>	15 %
<b>Location:</b> Test Pit (TP) - 28			
<b>Description:</b> Tan, Homogeneous, Cementitious Panel			
<b>Asbestos Types:</b> Chrysotile 15. %			
<b>Other Material:</b> Cellulose Trace, Non-fibrous 85. %			
0502014-080902-02	202082506-02	<b>Yes</b>	18 %
<b>Location:</b> TP-1			
<b>Description:</b> White, Homogeneous, Matrix Block Debris			
<b>Asbestos Types:</b> Chrysotile 18. %			
<b>Other Material:</b> Cellulose Trace, Non-fibrous 82. %			
0502014-080902-03	202082506-03	<b>Yes</b>	15 %
<b>Location:</b> TP-1			
<b>Description:</b> Tan, Homogeneous, Cementitious Panel			
<b>Asbestos Types:</b> Chrysotile 15. %			
<b>Other Material:</b> Cellulose Trace, Non-fibrous 85. %			
0502014-080902-04	202082506-04	<b>Yes</b>	15 %
<b>Location:</b> TP-2			
<b>Description:</b> Tan, Homogeneous, Cementitious Panel			
<b>Asbestos Types:</b> Chrysotile 15. %			
<b>Other Material:</b> Cellulose Trace, Non-fibrous 85. %			
0502014-080902-05	202082506-05	<b>Yes</b>	18 %
<b>Location:</b> TP-2			
<b>Description:</b> White, Homogeneous, Cementitious Panel			
<b>Asbestos Types:</b> Chrysotile 18. %			
<b>Other Material:</b> Cellulose Trace, Non-fibrous 82. %			

**SCIENTIFIC LABORATORIES, INC.**

117 EAST 30TH STREET

NEW YORK, NY 10016

TEL: (212) 679-8600 • FAX: (212) 679-9392

**PLM Bulk Asbestos Report**

PMK Group  
Attn: Robert Kingsbury  
65 Jackson Drive  
PO Box 5000  
Cranford, NJ 07016

Date Received 08/13/2002 SciLab Job No. 202082506

Date Examined 08/15/2002 P.O. # 0502014

Page 2 of 3

RE: 0502014; Borough Of South Plainfield; Veterans  
Memorial Park

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
0502014-080902-06	202082506-06	No	NAD <sup>1</sup>

Location: TP-6

Description: Black, Homogeneous, Asphaltic Compound

Asbestos Types:

Other Material: Non-fibrous 0.7 %

0502014-080902-07	202082506-07	Yes	12 %
-------------------	--------------	-----	------

Location: TP-6

Description: Beige, Homogeneous, Fibrous Debris

Asbestos Types: Chrysotile 12. %

Other Material: Cellulose Trace, Non-fibrous 88. %

0502014-080902-08	202082506-08	Yes	10 %
-------------------	--------------	-----	------

Location: TP-23

Description: White, Homogeneous, Fibrous Debris

Asbestos Types: Chrysotile 10. %

Other Material: Cellulose Trace, Non-fibrous 90. %

0502014-080902-09	202082506-09	Yes	15 %
-------------------	--------------	-----	------

Location: TP-24

Description: White, Homogeneous, Fibrous Debris

Asbestos Types: Chrysotile 15. %

Other Material: Cellulose 2. %, Fibrous glass 5. %, Non-fibrous 78. %

**SCIENTIFIC LABORATORIES, INC.**

117 EAST 30TH STREET

NEW YORK, NY 10016

TEL: (212) 679-8600 • FAX: (212) 679-9392

**PLM Bulk Asbestos Report**

PMK Group  
Attn: Robert Kingsbury  
65 Jackson Drive  
PO Box 5000  
Cranford, NJ 07016

**Date Received** 08/13/2002 **SciLab Job No.** 202082506**Date Examined** 08/15/2002 **P.O. #** 0502014**Page** 3 **of** 3**RE:** 0502014; Borough Of South Plainfield; Veterans  
Memorial Park**Reporting Notes:**

- (1) PLM analysis of NOB inert material.

Analyzed by: Ivan H. Recalde

\*NAD/NSD = no asbestos detected; NA = not analyzed; NA/PS = not analyzed / positive stop; PLM Bulk Asbestos Analysis by EPA 600/M4-82-020 per 40 CFR 763 (NVLAP Lab #200546-0) and ELAP PLM Analysis Protocol 198.1 for New York samples (NYSDOH ELAP Lab # 11480); Note: PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. TEM is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing in New York State (also see EPA Advisory for floor tile, FR 59, 146, 38970, 8/1/94). National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the laboratory. This PLM report relates ONLY to the items tested. AIHA# 102843; VT Cert# AL016055

Reviewed By: \_\_\_\_\_



## ASBESTOS LABORATORY WORK ORDER/CHAIN OF CUSTODY

DATE: 08/12/02

In accordance with the Subcontractor Analytical Services Agreement between \_\_\_\_\_ (Subcontractor), and PMK Group, Inc. (PMK), dated \_\_\_\_\_, this Work Order describes the Scope of Services, Time Schedule, Charges and Payment Conditions for the Project described below.

CLIENT: Borough of South Plainfield  
PROJECT NAME: Veterans Memorial Park

PROJECT #: 0502014  
WORK ORDER # \_\_\_\_\_

## HEREIN FIND THE FOLLOWING SAMPLES:

- ☒ Bulk Samples  
☐ Air Sample Cassettes - ☐ PCM ☐ TEM  
☐ Paint Chip Samples  
☐ Other

## SAMPLE NOS.

0502014 - 080902 -  
#01 - #09

## TURNAROUND TIME:

- ☐ Rush ☐ 6 Hours ☐ 12 Hours ☐ 24 Hours ☐ 48 Hours ☒ Other 3 day TAT

## TO BE ANALYZED FOR ASBESTOS CONTENT BY THE FOLLOWING METHOD:

- ☐ Polarized Light Microscopy with Dispersion Staining  
☒ ELAP Protocol, TEM ☒ Yes ☐ No  
☐ Lead content analysis (percentage)  
☐ Phase Contrast Microscopy  
☐ Transmission Electron Microscopy  
☐ Screening Analysis (Fiber Count)  
☐ Quantitative (Local Area Diffraction)  
☐ AHERA Protocol

☐ Other \_\_\_\_\_

## REPORTING:

Report initial results to: Stanley Lewandowski

Send final report to: Stanley Lewandowski

## TAKE THE FOLLOWING ACTION WITH SAMPLES:

- ☐ Return to the PMK Group - Use Transmittal  
☐ Retain Indefinitely ☒ Retain until notified otherwise  
☐ Dispose of.

## CHAIN OF CUSTODY:

If enclosures are not as noted, please inform us immediately.

PMK Packaged by: Janette Csafari  
Transmitted by: UPS  
Method of Transmittal: "

Date: 08/12/02  
Date: ↓  
Date: ↓

## LABORATORY:

Received by Lab: ☐ Sealed Package ☐ Damaged and Inventoried

Handled by: Leona 1130  
Sample Preparation: \_\_\_\_\_  
Sample Analysis: \_\_\_\_\_  
Packaged by: \_\_\_\_\_

Date: 8/13/02  
Date: \_\_\_\_\_  
Date: \_\_\_\_\_  
Date: \_\_\_\_\_

Chrysotile = Chrysotile Asbestos  
Amosite = Amosite Asbestos  
ND = No Asbestos detected in samples

Date - 08/09/02  
Client - Borough of So. Plainfield  
Project - Veterans Memorial Park  
Project # - 0502014

[illegible]



## **APPENDIX E**

### **TEST PIT LOGS**



## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-1



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Jeff Villanova**CLIENT:** South Plainfield**DATE:** 8/7/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Red brown silty sand from 0.0-4.5ft.	
1			
2		Tiles encountered, Top of 55 gallon drum at 2.0 feet	
3		Fragments of black tar	
4		Asbestosis fabric sheeting	
5		Light brown clayey silt, some fine sand (native).	At 3.0ft dust monitor reading at .132mg/kg.
6		TP-1 terminated at 5.0'.	
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-1**GROUNDWATER READINGS:** Not Encountered**REF.ELEV.:****TIME:****COORDINATES:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-2



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**CLIENT:** South Plainfield**JOB NUMBER:** 0502014**CONTRACTOR:** Aurora**INSPECTOR:** Jeff Villanova**DATE:** 8/7/02**PURPOSE:** Advance delineation test pit.**DEPTH REACHED:** 7 feet*Beyond 7 ft*

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Red brown silty sand, asphalt paving pieces at 0.5'.	
1		Asbestos Tiles	
2		Cinderblock, red brick concrete block at 2.5-4.5'.	
3			
4			
5			
6		Light brown clayey silt. Brown fine to coarse sand.	
7		TP-2 terminated at 7.0 feet.	
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-2**REF.ELEV.:****COORDINATES:****GROUNDWATER READINGS:** Not Encountered**TIME:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-3



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**CLIENT:** South Plainfield**JOB NUMBER:** 0502014**CONTRACTOR:** Aurora**INSPECTOR:** Jeff Villanova**DATE:** 8/7/02**PURPOSE:** Advance delineation test pit.**DEPTH REACHED:** 5 feet*Beyond back to*

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Red brown sandy soil.	
1		Gobules of black tar, pieces of road paving, brick pieces at 6 inches.	
2			
3			
4		Grey clay, mottled brown silt.	
5		TP-3 terminated at 5.0 feet.	
6			
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-3**REF.ELEV.:****COORDINATES:****GROUNDWATER READINGS:** Not Encountered**TIME:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-4



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

PROJECT: Veterans Memorial Field

CLIENT: South Plainfield

JOB NUMBER: 0502014

CONTRACTOR: Aurora

INSPECTOR: Jeff Villanova

DATE: 8/7/02

PURPOSE: Advance delineation test pit.

DEPTH REACHED: 8 feet

*Handwritten signature: beyond R*

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Brown sandy soil.	
1		Encountered metal, remains of car bench seat, a carpet, glass containers, wood, wire mesh and brick.	
2		Stained soil with naphthalene, petroleum odor from 4 to 7.5 feet	
3			
4	TP-4		Soil sample TP-4 collected at 3.5-4ft. for PP+40 analysis.
5			
6			
7	TP-4d		Wet at 7.5'. Soil sample TP-4d collected at 7-7.5ft. for PP+40 analysis.
8		Fine to coarse sand.	
		TP-4 terminated at 8.0 feet.	
9			
10			
11			
12			
13			

LOCATION: TP-4

REF.ELEV.:

COORDINATES:

GROUNDWATER READINGS: Not Encountered

TIME:

ELEVATION:

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-5



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

PROJECT: Veterans Memorial Field

CLIENT: South Plainfield

JOB NUMBER: 0502014

CONTRACTOR: Aurora

INSPECTOR: Jeff Villanova

DATE: 8/7/02

PURPOSE: Advance delineation test pit.

DEPTH REACHED: 4.5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Brown sand, little silt and gravel small amount of broken pieces of road asphalt	
1			
2			
3		Grey clay.	
4			
5		TP-5 terminated at 4.5 feet.	
6			
7			
8			
9			
10			
11			
12			
13			

LOCATION: TP-5

REF.ELEV.:

COORDINATES:

GROUNDWATER READINGS: Not Encountered

TIME:

ELEVATION:

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-6



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

PROJECT: Veterans Memorial Field

INSPECTOR: Jeff Villanova

CLIENT: South Plainfield

DATE: 8/7/02

JOB NUMBER: 0502014

PURPOSE: Advance deliniation test pit.

CONTRACTOR: Aurora

DEPTH REACHED: 7.5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0	TP-6	Brown silty sand, little silt. Layer of 3.5 inch thick asphalt at 2-2.5'. White fiber-like material layer. Asbestos tiles on west end, glass jars, copper wire, brick and wood. Brick and glass mixed soil to 6.5'.      Grey clay. Fine to coarse sand, little silt.	Petroleum odor and naphthalene odor  Soil sample TP-6 collected at 2.5-3.0ft. from stained black soil for PP+40 analysis.     Soil sample TP-6d collected at 6.0-6.5ft. for PP+40 analysis.
1			
2			
3			
4			
5			
6			
7			
8	TP-6 terminated at 7.5 feet.		
9			
10			
11			
12			
13			

LOCATION: TP-6

GROUNDWATER READINGS: Not Encountered

REF.ELEV.:

TIME:

COORDINATES:

ELEVATION:

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-7



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

PROJECT: Veterans Memorial Field

INSPECTOR: Jeff Villanova

CLIENT: South Plainfield

DATE: 8/7/02

JOB NUMBER: 0502014

PURPOSE: Advance delineation test pit.

CONTRACTOR: Aurora

DEPTH REACHED: 4.5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Brown, silty sand.	
1		3.5 inch thick asphalt paving at 1.0'.	
2			
3		Grey clay.	
4		TP-7 terminated at 4.5 feet	
5			
6			
7			
8			
9			
10			
11			
12			
13			

LOCATION: TP-7

GROUNDWATER READINGS: Not Encountered

REF.ELEV.:

TIME:

COORDINATES:

ELEVATION:



## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-8



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

PROJECT: Veterans Memorial Field

INSPECTOR: Jeff Villanova

CLIENT: South Plainfield

DATE: 8/7/02

JOB NUMBER: 0502014

PURPOSE: Advance delineation test pit.

CONTRACTOR: Aurora

DEPTH REACHED: 3.5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Brown silty sand	
1		Stained soil, looks like asphalt product.	PID reading Black substance = 4.0 ppm
2			Phenol odor noted in excavation.
3		At 2.5' south wall black tar like material flowed into excavation.	
		Green/grey clay.	PID reading in grey clay = 1.4 ppm
4		TP-8 terminated at 3.5 feet	
5			
6			
7			
8			
9			
10			
11			
12			
13			

LOCATION: TP-8

GROUNDWATER READINGS: Not Encountered

REF.ELEV.:

TIME:

COORDINATES:

ELEVATION:

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-9



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Jeff Villanova**CLIENT:** South Plainfield**DATE:** 8/7/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 3.5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Brown sand, little silt and gravel	
1		Green earthworms observed	
2			
3		Pieces of glass mixed with soil.	
4		TP-9 terminated at 3.5 feet	
5			
6			
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-9**GROUNDWATER READINGS:** Not Encountered**REF.ELEV.:****TIME:****COORDINATES:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-10



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Jeff Villanova**CLIENT:** South Plainfield**DATE:** 8/7/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0	TP-10	Brown sand, little silt and gravel.	Phenol odor at 2.0 ft Soil sample TP-10 collected at 2-2.5 ft. for PP+40 analysis.  Soil sample TP-10d collected at 3.5-4ft. for PP+40 analysis.
1		Pocket of stained green sand at 1-1.5ft.	
2		Gobules of black substance, stained soil.	
3			
4		Green clay	
5		Test pit TP-10 terminated at 5 feet.	
6			
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-10**GROUNDWATER READINGS:** Not Encountered**REF.ELEV.:****TIME:****COORDINATES:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-11



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Jeff Villanova**CLIENT:** South Plainfield**DATE:** 8/7/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0			
1		Brown sand, little silt and gravel. Asbestos tiles at 1-5'.	
2		Asbestos sheeting.	
3			
4			
5		Pocket of light tan fine sand Brown/tan mottled clay.	
6		TP-11 terminated at 6.0 feet.	
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-11**GROUNDWATER READINGS:** Not Encountered**REF.ELEV.:****TIME:****COORDINATES:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-12



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Jeff Villanova**CLIENT:** South Plainfield**DATE:** 8/7/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 4.5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Brown sand, little silt and gravel.	
1		Fill material, greyish gravel and sand	
2			
3		Red brown sandy silt.	
4		Grey green clay	
5		TP-12 terminated at 4.5'.	
6			
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-12**GROUNDWATER READINGS:** Not encountered**REF.ELEV.:****TIME:****COORDINATES:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-13



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Jeff Villanova**CLIENT:** South Plainfield**DATE:** 8/7/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Brown sand, little silt and gravel.	
1			
2		Pocket of Tiles at 2 -3 ft north end of Test pit only Metal debris, wood and glass mixed in soil	Soil sample TP-13 collected at 1.5-2ft. for PP+40 from sandy fill material.
3		Mottled brown clay	
4			
5		TP-13 terminated at 5 feet	
6			
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-13**GROUNDWATER READINGS:** Not encountered**REF.ELEV.:****TIME:****COORDINATES:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-14



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Jeff Villanova**CLIENT:** South Plainfield**DATE:** 8/8/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Brown sand, trace silt.	
1		Soil mixed with pieces of broken glass bottles and whole bottles from 1-2.5 ft.	
2			
3			
4		Greenish gray clay	
5		TP-14 terminated at 5 feet.	
6			
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-14**GROUNDWATER READINGS:** Not encountered**REF.ELEV.:****TIME:****COORDINATES:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-15



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Jeff Villanova**CLIENT:** South Plainfield**DATE:** 8/8/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Red brown sand	
1		Piece of scrap metal at 1.0 2.5 ft	
2		Large chunks of concrete at 1.5 to 3.0 ft.	
3		Tree parts	
4		Mottled brown/green clay	
5		TP-15 terminated at 5 feet	
6			
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-15**GROUNDWATER READINGS:** Not encountered**REF.ELEV.:****TIME:****COORDINATES:****ELEVATION:**



## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-16



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

PROJECT: Veterans Memorial Field

INSPECTOR: Jeff Villanova

CLIENT: South Plainfield

DATE: 8/8/02

JOB NUMBER: 0502014

PURPOSE: Advance delineation test pit.

CONTRACTOR: Aurora

DEPTH REACHED: 4.5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Red brown sand, little silt.	
1		Small amount of concrete pieces and glass at 0.5- 2.5 ft.	
2			
3			
4		Green clay.	
5		TP-16 terminated at 4.5 feet	
6			
7			
8			
9			
10			
11			
12			
13			

LOCATION: TP-16

GROUNDWATER READINGS: Not encountered

REF.ELEV.:

TIME:

COORDINATES:

ELEVATION:

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-17



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Jeff Villanova**CLIENT:** South Plainfield**DATE:** 8/8/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 6.5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Brown sand, little silt	
1		Brick, white calking, broken glass bottles mix at 1.0 -3.0 ft.	
2			
3			
4		Greenish/gray clay	
5		Reddish brown sand	
6			
7		TP-17 terminated at 6.5 feet	
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-17**REF.ELEV.:****COORDINATES:****GROUNDWATER READINGS:** Not encountered**TIME:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-18



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Jeff Villanova**CLIENT:** South Plainfield**DATE:** 8/8/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 6 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Reddish brown sand, some silt.	
1			
2		Fill-soil with broken glass (white jar) fragments.	
3			
4		Gray clay, little sand and silt.	
5		Reddish brown sand, trace gravel.	
6		TP-18 terminated at 6'.	
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-18**GROUNDWATER READINGS:** Not encountered**REF.ELEV.:****TIME:****COORDINATES:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-19



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Jeff Villanova**CLIENT:** South Plainfield**DATE:** 8/8/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Brown sand, little silt	
1			
2		Pockets of grey sand and black tar like substance 1.0- 3.0 ft	
3		Motorcycle tire at 2.5 ft	
4		Brown/green clay	
5		TP-19 terminated at 5 feet	
6			
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-19**GROUNDWATER READINGS:** Not encountered**REF.ELEV.:****TIME:****COORDINATES:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-20



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Jeff Villanova**CLIENT:** South Plainfield**DATE:** 8/8/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Brown sand, little silt 0.0-4ft.	
1		Ceramic piece and some glass pieces at 1.0- 1.5 ft.	
2			
3			
4		Brown/green clay.	
5		TP-20 terminated at 5 feet	
6			
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-20**GROUNDWATER READINGS:** Not encountered**REF.ELEV.:****TIME:****COORDINATES:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-21



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

PROJECT: Veterans Memorial Field

INSPECTOR: Jeff Villanova

CLIENT: South Plainfield

DATE: 8/8/02

JOB NUMBER: 0502014

PURPOSE: Advance delineation test pit.

CONTRACTOR: Aurora

DEPTH REACHED: 6 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Brown/grey sand, little silt	
1			
2			
3		Glass bottle, can, roofing shingles Wire, white jar	
4		Tan/brown clay, some sand inter layer	
5			
6		Red sand, little silt	
7		TP-21 terminated at 6 feet	
8			
9			
10			
11			
12			
13			

LOCATION: TP-21

GROUNDWATER READINGS: Not encountered

REF.ELEV.:

TIME:

COORDINATES:

ELEVATION:

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-22



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

PROJECT: Veterans Memorial Field

INSPECTOR: Jeff Villanova

CLIENT: South Plainfield

DATE: 8/8/02

JOB NUMBER: 0502014

PURPOSE: Advance delineation test pit.

CONTRACTOR: Aurora

DEPTH REACHED: 4.5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Black tar like substance, musty odor	
1		Red brown sand, little silt.	
2		Large quantity of black tar like substance, two shades: black and olive color at 1.0 -4.0 ft	Phenol odor through test pit
3			PID = 1.6 ppm
4		Green clay	
5		TP-22 terminated at 4.5 feet	
6			
7			
8			
9			
10			
11			
12			
13			

LOCATION: TP-22

REF.ELEV.:

COORDINATES:

GROUNDWATER READINGS: Not encountered

TIME:

ELEVATION:

**TEST PIT SOIL LOG****TEST PIT NUMBER: TP-23**

65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Zachary Papa**CLIENT:** South Plainfield**DATE:** 8/8/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 6.5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Red brown fine to medium sand	
1		Asphalt (soft at base) at 1.0-1.5 ft	
2		Asbestos transite tiles (large quantity) at 1.5- 4.5 ft	large quantity of tiles (3 foot thick)
3		wood debris. (white and maroon)	
4			
5		Grey clay/little organics and mottling	
6			
7		TP-23 terminated at 6.5 feet.	
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-23**GROUNDWATER READINGS:** Not encountered**REF.ELEV.:****TIME:****COORDINATES:****ELEVATION:**



**TEST PIT SOIL LOG****TEST PIT NUMBER: TP-24**

65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Zachary Papa**CLIENT:** South Plainfield**DATE:** 8/8/02**JOB NUMBER:** 0502014**PURPOSE:** Advance deliniation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 6 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Fill	
1		Old asphalt (broken up) at 1.0-1.5 ft	
2		Garbage fill: bottles, plastic, trace transite tiles.	
3			
4		White unknown substance (not clay) at 3.5-4.5 ft	
5		Gray clay, little silt, organics mottling, natural.	
6		TP-24 terminated at 6 feet	
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-24**GROUNDWATER READINGS:** Not encountered**REF.ELEV.:****TIME:****COORDINATES:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-25



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

PROJECT: Veterans Memorial Field

INSPECTOR: Zachary Papa

CLIENT: South Plainfield

DATE: 8/8/02

JOB NUMBER: 0502014

PURPOSE: Advance delineation test pit.

CONTRACTOR: Aurora

DEPTH REACHED: 4 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Shale (weathered), fill, then grass with red brown sand.	
1			
2		Black tar like substance (solid) 1.5-2.0 ft Black tar like substance (liquid, flowing) 2.0- 3.5 ft	PID= 1.8 ppm
3			
4		Red brown fine to medium sand and gray clay, natural	
5			
6			
7			
8			
9			
10			
11			
12			
13			

LOCATION: TP-25

REF.ELEV.:

COORDINATES:

GROUNDWATER READINGS: Not encountered

TIME:

ELEVATION:

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-26



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Zachary Papa**CLIENT:** South Plainfield**DATE:** 8/8/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 6 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Red brown shale fill.	
1			
2		Consistent debris-slag-gravel. Modified concrete/ tan/ brown fine to medium sand.	
3			
4		Gray sand, interlayers with white clay.	
5		Gray clay, little silt, trace organics (mottling).	
6		TP-26 terminated at 6 feet.	
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-6**GROUNDWATER READINGS:** Not encountered**REF.ELEV.:****TIME:****COORDINATES:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-27



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

PROJECT: Veterans Memorial Field

CLIENT: South Plainfield

JOB NUMBER: 0502014

CONTRACTOR: Aurora

INSPECTOR: Jeff Villanova

DATE: 8/9/02

PURPOSE: Advance delineation test pit.

DEPTH REACHED: 5.5 feet

*just w/in PL*

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Brownish red sand, little silt and gravel	
1		Fill material with. wire at 1-2.0 ft.	
2			
3			
4		Mottled brown/green clay Tan/brown medium sand, little silt	
5			
6		TP-27 terminated at 5.5 feet	
7			
8			
9			
10			
11			
12			
13			

LOCATION: TP-27

REF.ELEV.:

COORDINATES:

GROUNDWATER READINGS: Not encountered

TIME:

ELEVATION:

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-28



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

PROJECT: Veterans Memorial Field

INSPECTOR: Jeff Villanova

CLIENT: South Plainfield

DATE: 8/9/02

JOB NUMBER: 0502014

PURPOSE: Advance delineation test pit.

CONTRACTOR: Aurora

DEPTH REACHED: 5.5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Brownish red sand, little silt 0.5ft-4ft. 75% soil mixed with tiles	West end of excavation 100% tiles.
1			
2			
3		Chunks of asbestos wrap	
4		Brown sand, little silt	
5		Mottled brown/greenish clay	
6		TP-28 terminated at 5.5 feet.	
7			
8			
9			
10			
11			
12			
13			

LOCATION: TP-28

GROUNDWATER READINGS: Not encountered

REF.ELEV.:

TIME:

COORDINATES:

ELEVATION:

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-29



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Jeff Villanova**CLIENT:** South Plainfield**DATE:** 8/9/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Brownish red sand, little silt.	
1			
2		Encountered 10% tiles at 2 ft	
3		Fill material debris: glass, burned wood at 2- 4.0 ft	
4			
5		Green/gray clay	
6		TP-29 terminated at 5 feet	
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-29**GROUNDWATER READINGS:** Not encountered**REF.ELEV.:****TIME:****COORDINATES:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-30



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

PROJECT: Veterans Memorial Field

INSPECTOR: Jeff Villanova

CLIENT: South Plainfield

DATE: 8/9/02

JOB NUMBER: 0502014

PURPOSE: Advance delineation test pit.

CONTRACTOR: Aurora

DEPTH REACHED: 6.3 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0			
1		Brown sand, little silt.	
2		1.5-4.5ft. soil mixed with tiles.	
3		15% tiles, gray sand mixed with burned wood, tree pieces, black gobules, one large ceramic switch.	
4			
5		Green/gray clay.	
6		Brown tan, fine to course sand, trace silt.	
7		TP-30 terminated at 6.3'.	
8			
9			
10			
11			
12			
13			

LOCATION: TP-30

GROUNDWATER READINGS: Not encountered

REF.ELEV.:

TIME:

COORDINATES:

ELEVATION:

**TEST PIT SOIL LOG****TEST PIT NUMBER: TP-31**

65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Jeff Villanova**CLIENT:** South Plainfield**DATE:** 8/9/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 6.5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Red brown sand, little silt.	
1		Grey sand, some silt and gravel.	Soil sample TP-31 collected at 1.0-1.5ft. for PP+40 analysis.
2			
3			
4			
5			
6		Grey sand and brown silt.	
7		TP-31 terminated at 6.5 feet	
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-31**REF.ELEV.:****COORDINATES:****GROUNDWATER READINGS:** Not encountered**TIME:****ELEVATION:**



## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-32



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Jeff Villanova**CLIENT:** South Plainfield**DATE:** 8/9/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 4.5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Brownish red sand, little silt and gravel.	
1		Soil mixed with broken glass at 1.0- 2.5 ft	
2			
3			
4		Green clay, moist.	
5		TP-32 terminated at 4.5 feet	
6			
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-32**GROUNDWATER READINGS:** Not encountered**REF.ELEV.:****TIME:****COORDINATES:****ELEVATION:**

**TEST PIT SOIL LOG****TEST PIT NUMBER: TP-33**

65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Jeff Villanova**CLIENT:** South Plainfield**DATE:** 8/9/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 5.5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0	TP-33	Brown red sand, little silt.	Soil sample TP-33 collected from fill at 1.0-1.5ft. for PP+40 analysis.
1		Fill material grey/brown sand, 10% pieces of glass/slag.	
2		Brown red sand, little silt.	
3			
4			
5		Mottled brown/grey clay.	
6		TP-33 terminated at 5.5 feet	
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-33**REF.ELEV.:****COORDINATES:****GROUNDWATER READINGS:** Not encountered**TIME:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-34



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Jeff Villanova**CLIENT:** South Plainfield**DATE:** 8/9/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 4 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0	TP-34	Brown sand, little silt and gravel.	Soil sample TP-34 collected at 1-1.5ft. for PP+40 analysis.
1		Pieces of broken glass at 1 -2.0 ft	
2			
3		Mottled brown/green clay.	
4		TP-34 terminated at 4 feet	
5			
6			
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-34**REF.ELEV.:****COORDINATES:****GROUNDWATER READINGS:** Not encountered**TIME:****ELEVATION:**

**TEST PIT SOIL LOG****TEST PIT NUMBER: TP-35**

65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**CLIENT:** South Plainfield**JOB NUMBER:** 0502014**CONTRACTOR:** Aurora**INSPECTOR:** Devang Patel**DATE:** 8/13/02**PURPOSE:** Advance delineation test pit.**DEPTH REACHED:** 4.5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Topsoil.	no staining, no odor,
1		Brown sand, some silt	
2			
3			
4		Light brown silty clay, moist	
5		TP-35 terminated at 4.5'.	
6			
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-35**REF.ELEV.:****COORDINATES:****GROUNDWATER READINGS:** Not encountered**TIME:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-36



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Devang Patel**CLIENT:** South Plainfield**DATE:** 8/13/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 3 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Concrete.	
1		Cinderblock & ash mixed with concrete.	
2		Brown fine to medium sand, some silt.	
3		TP-36 terminated at 3 feet	
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-36**GROUNDWATER READINGS:** Not Encountered**REF.ELEV.:****TIME:****COORDINATES:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-37



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Devang Patel**CLIENT:** South Plainfield**DATE:** 8/13/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 2.5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Topsoil.	
1		Light brown fine to medium sand, some silt, little fine to medium gravel.	no staining, no odor
2			
3		TP-37 terminated at 2.5 feet	
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			

**LOCATION:** TP-37**GROUNDWATER READINGS:** Not encountered**REF.ELEV.:****TIME:****COORDINATES:****ELEVATION:**

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-38



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

PROJECT: Veterans Memorial Field

INSPECTOR: Devang Patel

CLIENT: South Plainfield

DATE: 8/13/02

JOB NUMBER: 0502014

PURPOSE: Advance delineation test pit.

CONTRACTOR: Aurora

DEPTH REACHED: 4 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Topsoil.	
1		Light brown fine to medium sand, some silt intermixed with slag from furnace, little gravel	
2			
3		Brown fine to medium sand, some silt, trace gravel	
4		Grading to gray colored clay.	
5		TP-38 terminated at 4 feet.	
6			
7			
8			
9			
10			
11			
12			
13			

LOCATION: TP-38

GROUNDWATER READINGS: Not encountered

REF.ELEV.:

TIME:

COORDINATES:

ELEVATION:

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-39



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

**PROJECT:** Veterans Memorial Field**INSPECTOR:** Devang Patel**CLIENT:** South Plainfield**DATE:** 8/13/02**JOB NUMBER:** 0502014**PURPOSE:** Advance delineation test pit.**CONTRACTOR:** Aurora**DEPTH REACHED:** 7.5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Topsoil.	
1		Brown fine to medium sand, some silt, slag from ash, decomposing wood.	
2			
3			
4			
5			
6		Brown fine to medium sand, some silt Wet at 6.0 ft	
7			
8		TP-39 terminated at 7.5 feet	
9			
10			
11			
12			
13			

**LOCATION:** TP-39**GROUNDWATER READINGS:** Not encountered**REF.ELEV.:****TIME:****COORDINATES:****ELEVATION:**



## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-40



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

PROJECT: Veterans Memorial Field

INSPECTOR: Devang Patel

CLIENT: South Plainfield

DATE: 8/13/02

JOB NUMBER: 0502014

PURPOSE: Advance delineation test pit.

CONTRACTOR: Aurora

DEPTH REACHED: 4 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Topsoil.	
1		Brown sand, some silt, wood chips.	
2			
3			
4		Gray clay.	
5		TP-40 terminated at 4 feet	
6			
7			
8			
9			
10			
11			
12			
13			

LOCATION: TP-40

GROUNDWATER READINGS: Not encountered

REF.ELEV.:

TIME:

COORDINATES:

ELEVATION:

## TEST PIT SOIL LOG

TEST PIT NUMBER: TP-41



65 Jackson Drive  
P.O. Box 5000  
Cranford, NJ 07016-5000

PROJECT: Veterans Memorial Field

INSPECTOR: Devang Patel

CLIENT: South Plainfield

DATE: 8/13/02

JOB NUMBER: 0502014

PURPOSE: Advance delineation test pit.

CONTRACTOR: Aurora

DEPTH REACHED: 4.5 feet

DEPTH (ft)	SAMPLE	MATERIAL DESCRIPTION	REMARKS
0		Topsoil.	
1		Fill brown medium sand, some silt Crushed asphalt and fragments of coke.	
2			
3			
4		Gray clay.	
5		TP-41 terminated at 4.5 feet	
6			
7			
8			
9			
10			
11			
12			
13			

LOCATION: TP-41

GROUNDWATER READINGS: Not encountered

REF.ELEV.:

TIME:

COORDINATES:

ELEVATION:



## **APPENDIX F**

### **BASELINE ECOLOGICAL EVALUATION**



## Baseline Ecological Evaluation

For

**Veterans Memorial Park**

**Block 260, Lot 15.02**

**Borough of South Plainfield Middlesex County, New Jersey**

**PMK Group #0302037**

### PRINCIPALS

James Ferris, P.E.  
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Robert M. Gerard, CHMM

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Jayanti Chatterjee, CIH  
Lisa Sauer

## I. INTRODUCTION

On August 1, 2002 PMK Group (PMK) representatives performed a Baseline Ecological Evaluation (BEE) at the Veterans Memorial Park, located in the Borough of South Plainfield, Middlesex County, New Jersey. This Baseline Ecological Evaluation was performed in accordance with the *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E-3.11). The BEE is qualitative in nature and includes a general site inspection and documentation of existing onsite conditions, as well as a brief visual inspection of adjacent properties and land uses. The evaluation was conducted to identify environmentally sensitive areas, and establish a baseline environmental condition for the project.

## II. EXISTING CONDITIONS

Veterans Memorial Park is located near the intersection of Church Street and Kaine Avenue in the Borough of South Plainfield, Middlesex County. The subject property is located in a residential area in the Borough of South Plainfield. The site is bounded to the north by a wooded area and Bound Brook, to the east by Kaine Avenue and residential properties, to the west by Spring Lake County Park and Bound Brook and to the south by residential properties and Conrail.

The Borough of South Plainfield currently owns the Site. The aerial photographs of the Site indicated that the subject property has been used as a park since 1954. There were also indications on the 1954 aerial photograph that portions of the northwest section of the Site were used for dumping. The park consists of a baseball field with lights, basketball court, playground, picnic areas, bathrooms and electrical shed. Most of the property is covered with grass except for a stone parking area off of Elm Street and an asphalt paved walkway that leads through the Site. Wetland habitats and a stream are located on the northern and southern portions of the park. Several sinkholes were noted scattered through out the site particularly in the northern section.

A review of the U.S.G.S. 7.5 Minute Series topographic map (1955) for Plainfield, New Jersey, indicates the property is relatively flat. Ground surface elevation is approximately 50 feet above mean sea level (msl). The regional overland drainage is to the east. The nearest natural surface water body is Bound Brook, which borders the property to the north. The Brook eventually branches off to the north and south and flows into Spring Lake located approximately 1,000 feet from the subject site.

## III. BACKGROUND

Based on the potential environmental impacts associated with the historical dumping activities, a site investigation was conducted to determine potential impacts at the site as a result of the historic fill. There is black "tar like" substance emanating from the ground in several areas in the north central portion of the property, covering approximately

18,000 square feet. However, many areas of stressed vegetation were also noted through out the grass areas in the vicinity of the unknown substance.

The subject property was divided into seven areas of concern (AOC). The Limited Site Investigation Report provides further details on the Areas of Concern. On March 21, 2002, representatives from PMK advanced seven exploratory soil borings in the vicinity of areas of concern #3 (Area of stressed vegetation), #5 (black ooze emanating from the ground), and #6 (sink holes). The soils varied across the site from fill material extending to depths as great as seven feet, to brownish red sands with little to trace silt. The fill material consisted of sandy gravel, wood, industrial processed glass and rubber. Soil boring B-5 indicated the tar like substance is a globule ranging in depths from 2.5 to 7.5 feet bsg.

The soil samples were analyzed for priority pollutants plus a forward library search of forty non-targeted compounds (PP+40). Soil sample B-6 was collected from the area of stressed vegetation in an attempt to investigate the rationale behind the differences in vegetation on the property. Based upon a review of the soil sample analytical results for soil sample B-6, the analytical results revealed concentrations of pesticides (4,4-DDD and 4,4-DDE) and Arsenic above the most stringent NJDEP SCC. Three soil samples (B-2, B-4 and B-5) and a gas chromatograph (GC) fingerprint sample (B-2GC) were collected from the stained areas and unknown substance. The samples were collected in an attempt to evaluate the presence of any contamination and identify the substance emanating from the ground and found in large concentrations below the ground. Based upon a review of the laboratory analytical results for soil samples B-2, B-4 and B-5, the following targeted compounds are present at the Site and were detected in some samples above the most stringent NJDEP SCC: Deildrin, Beryllium, base neutral compounds and PCB (Aroclor-1254). One soil sample, (B-1) was collected in an attempt to determine if any contaminants are buried below the observed sinkholes. Based on a review of the soil sample results for soil sample B-1, no targeted compounds were detected above the NJDEP SCC.

#### **IV. FINDINGS**

Based upon the visual inspection conducted by PMK Group on August 1, 2002, it was determined that areas of ecological concern exist onsite. Specifically, the areas of concern are the wetland habitat located on the northern and western portions of the property and Bound Brook located on the northern and southern boundaries of the property. Upon inspection of the onsite wetland habitats, it was determined that the wetland vegetation established onsite showed no signs of environmental stress due to the onsite contamination. It should be noted that during the wetland delineation performed on August 14, 2002, sheen and strong petroleum and hydrocarbon odor was noticed at 10 inches below surface grade in the wetland habitat located on the western portion of the site. Due to the close proximity of the wetlands to the contamination, a test pit investigation is proposed in order to assess potential impacts in the wetland habitat.

*agreed but  
need add'l  
detail -  
locations, etc*


#### **V. CONCLUSIONS**

As a result of the findings of this investigation, it has been determined that the wetland area should be further investigated due to the close proximity to the contamination. As mentioned above, a test pit investigation is proposed in the wetland area in order to further assess impacts. In addition, the analytical results for soil samples collected in the park indicate the presence of a variety of compounds above the most stringent NJDEP


SCC. Therefore, PMK Group has recommended further investigations of the AOC's in order to determine the extent of contamination at the site. PMK Group also recommends that the areas of ecological concern at the Site be reevaluated following completion of the investigation in the wetlands. Depending on the results of that investigation, additional ecological studies may be warranted to determine the potential for impacts to sensitive ecological receptors.

*meaning impacts  
by fill & asbestos?*

Prepared By:

  
Ericka Toolan  
Field Scientist

Reviewed and Released By:

  
Drew M. Di Sessa, P.E., P.P.  
Division Manager  
Associate





## **APPENDIX G**

### **NJDEP CERTIFICATIONS**

CERTIFICATIONS  
N.J.A.C. 7:26C-1.2 et seq.

Any person making a submission to the Department required by this chapter and pursuant to N.J.A.C. 7:26E, shall include the following signature and notarized certification, for each technical submittal. Additionally, the certification shall indicate the case name and address, case number, type of documents submitted, eg., Remedial Action Report, for each technical submittal.

TYPE OF DOCUMENT: Site Investigation Report/ Interim Remedial Action Workplan  
CASE NAME: Veterans Memorial Field  
CASE ADDRESS: Church Street and Kaine Avenue, South Plainfield, New Jersey  
CASE NUMBER: 02-04-29-1702-48

The following certification shall be signed by:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively, or;
3. For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official.
4. For persons other than 1 through 3 above, by the person with legal responsibility for the site.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement that I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

Printed Name x <u>DANIEL J GALLAGHER</u>	Title x <u>MAYOR</u>
Signature x <u>[Signature]</u>	Date x <u>NOVEMBER 13, 2002</u>
Notary Signature <u>[Signature]</u>	Date <u>11/13/02</u>

Sworn to and Subscribed before me this  
13<sup>TH</sup> day of NOV 20 02

Vincent G. Buttiglieri  
Notary Public of New Jersey  
My Commission Expires 2006



## **APPENDIX H**

### **PMK GROUP STANDARD QUALITY ASSURANCE PLAN**

## QUALITY ASSURANCE PROJECT PLAN

### TABLE OF CONTENTS

1.0	INTRODUCTION
2.0	SAMPLE CONTAINERS
3.0	QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) SAMPLES
3.1	FIELD BLANKS
3.2	TRIP BLANKS
3.3	DUPLICATE SAMPLES
4.0	DECONTAMINATION OF SAMPLING EQUIPMENT
5.0	SAMPLING PROCEDURES
5.1	SOIL SAMPLING
5.2	GROUNDWATER SAMPLING
5.3	SAMPLE IDENTIFICATION
5.4	SAMPLE TRANSPORTATION AND CUSTODY
6.0	SAMPLING OBJECTIVES
7.0	DOCUMENTATION
8.0	LABORATORY PERFORMANCE

This Quality Assurance Project Plan (QAPP) describes all field sampling procedures to be followed in order to provide valid analytical data. The proposed sampling procedures will assure that all samples will be collected, handled, delivered to the laboratory, and documented properly. The laboratory will provide their own QAPP for sample handling and analytical procedures within the laboratory, upon request.

## 2.0 SAMPLE CONTAINERS

Laboratory cleaned sample containers, preferably from the selected analytical laboratory which will perform the analyses, will be used for sample collection. The type of sample container is based on the matrix to be sampled and the analytical method to be used. The volume of sample is dependent on the laboratory's QAPP.

## 3.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) SAMPLES

QA/QC samples are utilized to provide control over the collection of analytical data and subsequent validation, review and interpretation of the data. The following are some of the procedures which will be utilized to ensure adequate QA/QC.

### 3.1 Field Blanks

The purpose of the Field Blank is to determine extraneous contamination sources. The Field Blank can also trace the effects of the ambient air during sampling as well as potential cross contamination from sampling equipment. The Field Blank is analyzed for the same parameters as the samples collected.

For the aqueous matrix, the Field Blank is taken at a frequency of one per day. For the non-aqueous matrix, Field Blanks are to be collected at a frequency of 10% of the total samples collected throughout the sampling event, if the sampling event lasts more than one day.

The Field Blank consists of two sets of sample containers. The first set is filled at the laboratory with demonstrated analyte-free water. The water used must be the same as that used in the laboratory where the analyses are performed. The blank water must be received at the site within one day of its laboratory preparation and must not be held on the site for more than two (2) days. The second set of containers remains empty until filled in the field. At the site, in the most contaminated area, the field blank water is passed through clean, decontaminated sampling equipment into the clean, laboratory supplied empty containers. The Field Blank must arrive back at the laboratory within one day of shipment from the site. While on site and during shipment, the field blank water and samples must be maintained at 4°C.

Field Blanks are not required when a sample is collected directly into the sample container.

### 3.2 Trip Blanks

The purpose of the Trip Blank is to detect extraneous sources of contamination such as sample containers, and cross contamination from shipment as well as laboratory reagent water, ambient air, or reagents used in laboratory analyses.

Trip Blanks consist of two 40 ml VO vials which are filled at the laboratory with demonstrated analyte-free water. The Trip Blank samples are analyzed for volatile organics only when water samples are being analyzed for volatile organics. Once laboratory filled, the Trip Blank is transported and handled in the same manner as the collected samples. It must be received in the field within one day of its preparation in the laboratory. The Trip Blank travels on the site with the empty bottles and returns to the laboratory, unopened, with the samples. One Trip Blank will be analyzed for each shipment of samples, not to exceed two (2) consecutive calendar days and must be maintained at 4°C while on site and during shipment.

### 3.3 Duplicate Samples (if required)

At the request of the regulatory program under which the sampling is being conducted, duplicate samples are taken on site and analyzed in order to compare results and judge laboratory performance of the analysis of two samples taken at the same location. Duplicate samples are taken from a minimum of five percent (or a minimum of one) of the samples for each matrix and are submitted to the laboratory as blind samples for analysis for all of the same parameters as the regular samples.

## 4.0 DECONTAMINATION OF SAMPLING EQUIPMENT

All sample collection equipment must be decontaminated before and during sampling to maintain the integrity of the sample and avoid cross-contamination between samples. The decontamination can occur either in the laboratory or the field, depending on the sampling procedures being undertaken.

All sample collection devices will be laboratory cleaned, packaged, and dedicated for exclusive use at one sampling location for that day. Extra sampling equipment will be available on site in the event that a particular device cannot be used.

Soil sample collection devices (such as split spoons, hand trowels and hand augers) are normally decontaminated in the field between uses. These devices are cleaned at a location remote from contact with any contamination.

The procedure for decontamination of dedicated field sampling equipment, whether the decontamination is conducted in the laboratory or the field, will be as follows.

1. Laboratory grade glassware detergent and tap water wash
2. Potable water rinse.
3. Distilled/deionized (ASTM II) water rinse
4. 10% nitric acid rinse (only if samples are to be analyzed for metals.  
Trace metals or higher grade HNO<sub>3</sub> will be diluted with distilled/deionized water)
5. Distilled/deionized rinse (for metals analyses)
6. Acetone rinse (for samples to be analyzed for organic constituents).

7. Total air dry (for organics)
8. Distilled/deionized rinse (for organic analyses)

After this procedure has been completed, the sampling device will be wrapped in cleaned and autoclaved aluminum foil equivalent material. Sampling equipment will remain in the wrapping material until it is used in the field. It will be handled as little as possible prior to use and disposable gloves will be worn at all times when the device is being handled.

Submersible pumps used to evacuate stagnant groundwater in the well casing, will be cleaned and flushed prior to and between each use. This procedure will consist of external laboratory grade detergent wash and tap water rinse, followed by a 15 gallon flush of potable water through the pump. Finally, the exterior of the pump will be rinsed with distilled/deionized water.

Surface pumps (centrifugal and diaphragm) used for well evacuation will be cleaned between well locations only if a check valve is not used. Dedicated polyethylene tubing will be used for each well. The pump and tubing will be placed on clean polyethylene sheeting to avoid contact with ground surface.

Electronic water level indicators and interface probes will be decontaminated before and between each use by wiping with clean paper towels, washing with laboratory grade detergent, rinsing with tap water, and followed by a distilled/deionized water rinse.

## 5.0 SAMPLING PROCEDURES

This section describes the field sampling methodologies that will be observed by personnel in accordance with regulatory guidelines. Personnel will obtain all samples using clean sampling devices and place the samples in clean sample containers while wearing clean gloves.

### 5.1 Soil Sampling

The following sampling procedures will be followed when collecting subsurface soil samples.

Subsurface soil samples will be collected with a dedicated geoprobe acetate core sampler, stainless steel hand auger, stainless steel hand trowel or split spoon. Soil samples will be scanned for organic vapors in accordance with the NJDEP Field Analysis Manual (July, 1994) and transferred into containers and capped with Teflon-lined lids.

### 5.2 Groundwater Sampling

The following procedures describe the protocol in which groundwater monitoring wells will be monitored, purged and sampled.

1. The well cap will be removed and organic vapors in the well will be immediately recorded using a PID/FID detector.
2. Prior to well purging, a determination will be made of whether there is any free product in the well. Presence of free product will be checked by utilizing an electronic oil/water probe. The oil/water probe will be decontaminated using



the procedures described previously. If free product is detected, the thickness of the product will be measured to the nearest 0.01 foot. If no free product is detected, the depth to groundwater will be measured, using a clearly marked permanent reference point on the inner well casing. The measurement will be made with either an electronic water level indicator, or the electronic oil/water probe. Depth to groundwater will be measured to the nearest 0.01 foot. Well sampling will not be conducted if free product is detected in the well.

3. The pH, dissolved oxygen, temperature and specific conductivity of the water will be measured prior to purging.
4. The volume of water in the well will be estimated from the well depth, the static water level, and the casing diameter (4-inch casing contains 0.6528 gallons per foot.)
5. The stagnant groundwater in the well casing will be purged using either a surface (centrifugal) pump (for depth to water less than 25 ft.), or a submersible pump (for depth to water greater than 25 ft.). The pumps will be decontaminated as described previously. The pump will be used to evacuate at least 3 well volumes. The volume will be measured in a bucket or trash can. If wells are low yield, a single evacuation of the well to near dryness will be undertaken and the wells allowed to recharge prior to sampling. Relevant data will be noted throughout this procedure, both before and after purging the well. During evacuation, the pump intake will be set no greater than six feet below the dynamic water level, descending as the purging causes the water level to drop.
6. The purged water will be discharged directly to the ground surface if not contaminated. If contaminated, the purged water will be run through an activated carbon unit prior to discharge to the ground surface, or collected in drums and disposed off-site.
7. The depth to water, pH, dissolved oxygen, temperature and specific conductivity of the water will be measured prior to sampling. When these parameters are observed to not deviate by more than 10% during subsequent measurements, groundwater sampling will commence.
8. Wells will be sampled within two hours of purging, ensuring that the water in the casing is representative of aquifer conditions. Slow recharging wells will be sampled within 24 hours of purging. The least contaminated wells are to be sampled first. At each well, the samples will be collected in order of anticipated decreasing volatility. A sample will be obtained by using a Teflon bailer suspended by a polypropylene rope. A laboratory cleaned, dedicated bailer and cord will be used for each well. The bailer will be slowly lowered into the well until it contacts the water surface. The bailer will be allowed to sink and fill and then slowly raised to the surface. The bailer will be tipped to allow a slow discharge from the top gently down the side of the sample bottle to minimize turbulence.

a. Volatile organic vials will be filled to overflowing and carefully capped to exclude air bubbles. If air bubbles are observed, a spare vial will be used to obtain another sample.

b. Semi volatile organic sample containers and other sample fractions will have a 10% void left in the sample bottles and not filled to overflowing.

9. The pH, dissolved oxygen, temperature and specific conductivity of the water will be measured after sampling.

### 5.3 Sample Identification

All sample containers will be marked with indelible ink before sample collection. After collection, the container will be sealed, and a sample label will be attached to the container and covered with clear vinyl tape.

Each sample container must be labeled with the following information.

1. Job Name and Number
2. Sample Number
3. Date and Time
4. Sampler's Name
5. Sample Type and Location
6. Sample Analysis

Sample numbers on the individual jars will be checked against the chain-of-custody form.

### 5.4 Sample Transportation and Custody

Samples are delivered to the NJDEP certified laboratory immediately following collection procedures (i.e., at the end of the day). If this is not possible, the samples are maintained at the required temperature in a secure refrigerator at the offices of PMK Group (Kenilworth, New Jersey) to maintain their integrity but will be transmitted to the laboratory within the required 48 hour holding time. These samples are then delivered the following morning to the laboratory. Samples are shipped according to Department of Transportation regulations (49 CFR 173.130).

The chain-of-custody procedure is utilized to document the history of each sample and its handling. Custody records trace a sample from its collection through all transfers of custody until it is transferred to the laboratory. Internal laboratory records then document the custody of the sample through its final deposition.

Standard procedures are employed both in the field and in the laboratory to maintain the integrity of the sample custody. Such procedures include the tagging of all sample containers, the use of custody seals where applicable, the use of chain-of-custody forms and standard schedule, and control and security procedures within the laboratory.

## 6.0 SAMPLING OBJECTIVES

Field samples are to be collected to delineate previously identified impacts at the subject site and to determine the potential for hazardous materials at the subject site.

## 7.0 DOCUMENTATION

Field notebooks used by personnel will be bound with numbered pages. All pertinent information regarding the site and the sampling procedures will be documented. Entries made in these notebooks must note the date and time. Information recorded in these notebooks will include:

- name of the individual making the entry;
- date and time of arrival and departure at the site;
- location of the samples taken;
- the method of collection;
- numbers of samples taken;
- date and time of collection;
- sample identification number(s)
- any field instrument calibration performed and/or instrument readings;
- weather conditions on the day of sampling and any field observations.

For ground water sampling, the following additional information will be entered into the field book:

- well identification number;
- organic vapors, pH, dissolved oxygen, temperature and conductivity;
- thickness of free product, if present;
- total depth of well;
- estimated water volume in well;
- start and end time of purging;
- total volume purged;

Photo documentation will be made of selected field activities with photo description, time photo was taken, photo location, and direction of photo all to be recorded in the field notebook.

## 8.0 LABORATORY PERFORMANCE

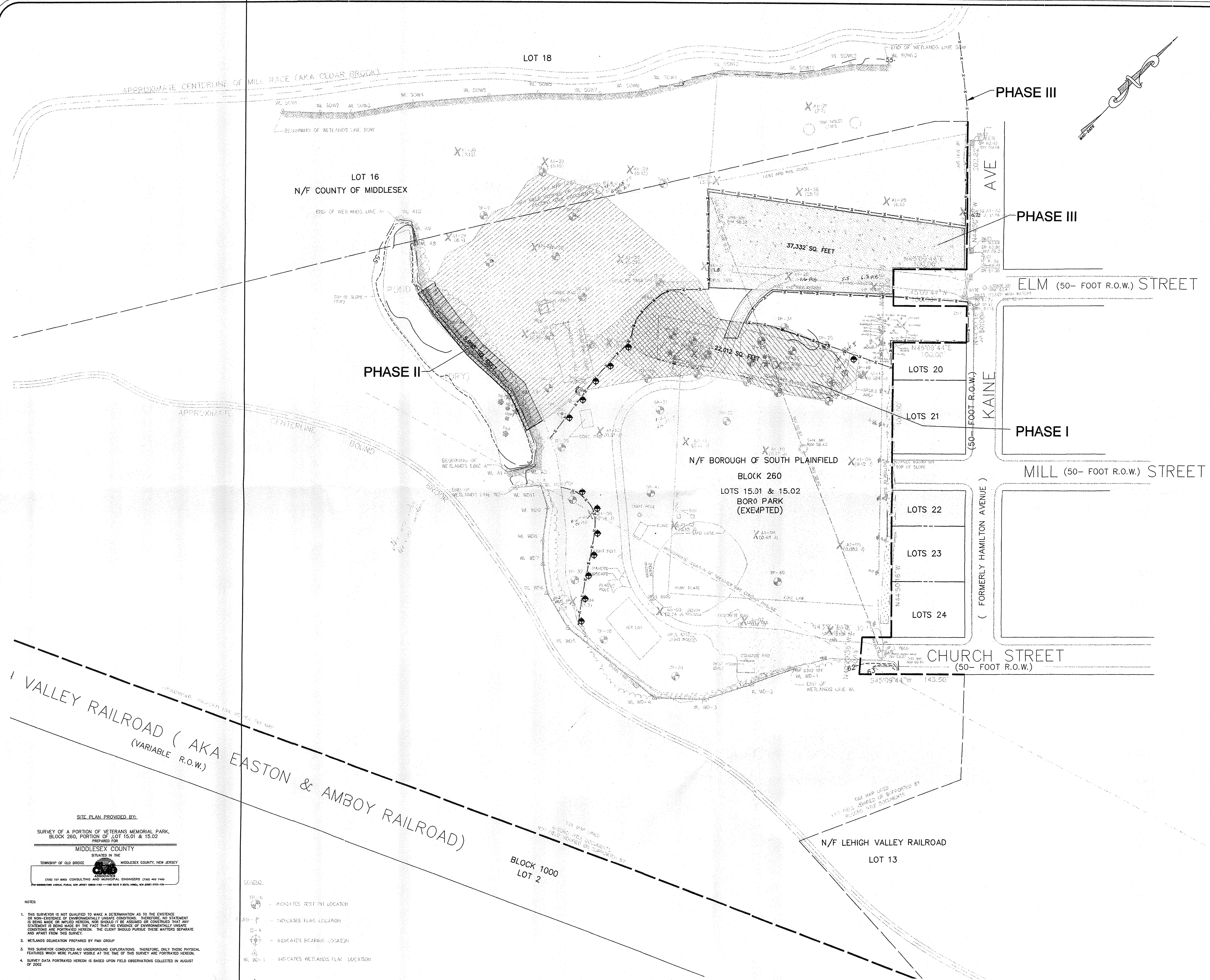
All analyses will be performed by a STL Envirotech Research, Inc. of Edison, New Jersey (New Jersey Laboratory Certification #12543). The laboratory is in good standing in the USEPA Contract Laboratory Program. Written laboratory SOPs are on file with the NJDEP. The laboratory will adhere to the personnel, certification, and analytical requirements listed in the NJDEP Technical Requirements for Site Remediation. The laboratory will produce data which meet the NJDEP Tier II requirements, and all supporting data will remain on file for five years.





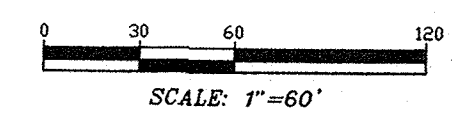






LEGEND

- PHASE I - APPROXIMATE EXTENT OF BLACK "TAR LIKE" SUBSTANCE TO BE EXCAVATED.
- PHASE II - APPROXIMATE LIMITS OF ASBESTOS CONTAINING MATERIAL TO BE EXCAVATED.
- PHASE III - AREA TO BE PAVED WITH ASPHALT.
- - - - - LOCATION OF 6 FOOT CHAIN LINK FENCE TO BE INSTALLED (PHASE III).
- ⊕ - APPROXIMATE LOCATION OF PROPOSED SURFICIAL PCB SOIL SAMPLES.
- TP-10 - NUMBER AND LOCATION OF TEST PITS.
- B-1 - NUMBER AND APPROXIMATE LOCATION OF SOIL BORING (INSTALLED ON 3/21/02)
- SG-1 - SEDIMENT SAMPLE LOCATION (COLLECTED ON 7/24/02)
- R-1 - SAMPLE LOCATION (COLLECTED 8/1/02)
- R-1A - DELINEATION SOIL SAMPLE LOCATION (COLLECTED ON 8/5/02)
- GC-2 - GC FINGER PRINT SAMPLE LOCATION (COLLECTED ON 7/23/02)
- DEP-1 - N.J.D.E.P. VISUAL SAMPLE LOCATION (COLLECTED ON 7/23/02)
- SS-8 - SAMPLE COLLECTED BY EDISON WETLANDS ASSOCIATION INC. ON 7/19/02.
- X - APPROXIMATE LOCATION OF EPA SAMPLES COLLECTED IN 1999 FOR PCB ANALYSIS
- ★ - MIDDLESEX COUNTY HEALTH DEPT. SAMPLES (COLLECTED ON 7/17/02)
- ⊕ - UTILITY POLE



CAD FILE GNV\0502014\0502014-rev\_remed.dwg

DATE BY REVISION

VETERANS MEMORIAL PARK  
CHURCH STREET & KAINE AVENUE  
SOUTH PLAINFIELD, NEW JERSEY

PROPOSED REMEDIAL ACTION PLAN



DRAWN BY: J.V. DATE: 10-13-02  
CHECKED BY: J.V. SCALE: 1"=60'  
PROJECT NO.: 0502014 PLATE NUMBER: 6

PROFESSIONAL ENGINEER CERT. No.

DATE: CERTIFICATE OF AUTHORIZATION #04277039

SITE PLAN PROVIDED BY:

SURVEY OF A PORTION OF VETERANS MEMORIAL PARK,  
BLOCK 260, PORTION OF LOT 15.01 & 15.02  
PREPARED FOR

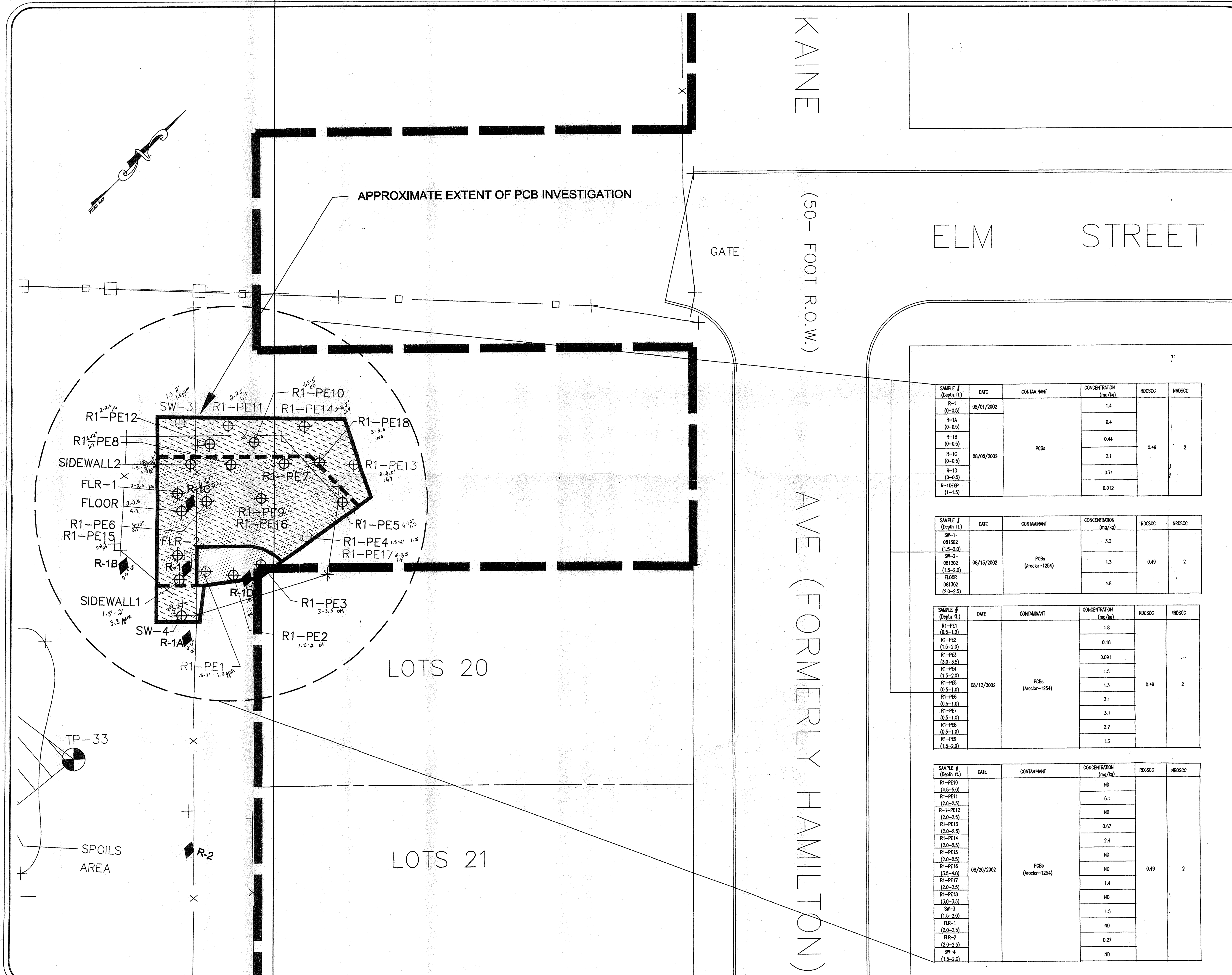
MIDDLESEX COUNTY  
SITUATED IN THE  
TOWNSHIP OF OLD BRIDGE MIDDLESEX COUNTY, NEW JERSEY

1100 300 8000 CONSULTING AND ENVIRONMENTAL ENGINEERS (202) 443 7400  
1100 300 8000 CONSULTING AND ENVIRONMENTAL ENGINEERS (202) 443 7400

- NOTES:
1. THIS SURVEYOR IS NOT QUALIFIED TO MAKE A DETERMINATION AS TO THE EXISTENCE OR NON-EXISTENCE OF ENVIRONMENTALLY UNSAFE CONDITIONS. THEREFORE, NO STATEMENT IS BEING MADE OR IMPLIED HEREON, NOR SHOULD IT BE ASSUMED OR CONTINUED THAT ANY STATEMENT IS BEING MADE BY THE FACT THAT NO EVIDENCE OF ENVIRONMENTALLY UNSAFE CONDITIONS ARE PORTRAYED HEREON. THE CLIENT SHOULD PURSUE THESE MATTERS SEPARATE AND APART FROM THIS SURVEY.
  2. WETLANDS DELINEATION PREPARED BY PMK GROUP
  3. THIS SURVEYOR CONDUCTED NO UNDERGROUND EXPLORATIONS. THEREFORE, ONLY THOSE PHYSICAL FEATURES WHICH WERE PLAINLY VISIBLE AT THE TIME OF THIS SURVEY ARE PORTRAYED HEREON.
  4. SURVEY DATA PORTRAYED HEREON IS BASED UPON FIELD OBSERVATIONS COLLECTED IN AUGUST OF 2002

- LEGEND:
- TP-10 - INDICATES TEST PIT LOCATION
  - B-1 - INDICATES SOIL BORING LOCATION
  - SG-1 - INDICATES SEDIMENT SAMPLE LOCATION
  - R-1 - INDICATES SAMPLE LOCATION
  - R-1A - INDICATES DELINEATION SOIL SAMPLE LOCATION
  - GC-2 - INDICATES GC FINGER PRINT SAMPLE LOCATION
  - DEP-1 - INDICATES N.J.D.E.P. VISUAL SAMPLE LOCATION
  - SS-8 - INDICATES SAMPLE COLLECTED BY EDISON WETLANDS ASSOCIATION INC.
  - X - APPROXIMATE LOCATION OF EPA SAMPLES COLLECTED IN 1999 FOR PCB ANALYSIS
  - ★ - MIDDLESEX COUNTY HEALTH DEPT. SAMPLES
  - ⊕ - UTILITY POLE





LEGEND

- TP-20 - NUMBER AND LOCATION OF TEST PITS.
- R-1 - SAMPLE LOCATION (COLLECTED 8/1/02)
- R-1A - DELINEATION SOIL SAMPLE LOCATION (COLLECTED ON 8/5/02)
- R1-PE11 - APPROXIMATE LOCATION OF SAMPLES CONDUCTED ON AUGUST 12, 13 AND 20, 2002.
- ⊕ - INDICATES CONCENTRATION ABOVE NJDEPSCC REMAINING ON SITE.
- RDCSCC - RESIDENTIAL DIRECT CONTACT SOIL CLEANUP CRITERIA
- NRDCSCC - NON-RESIDENTIAL DIRECT CONTACT SOIL CLEANUP CRITERIA
- Ø - UTILITY POLE
- ▨ - APPROXIMATE LIMITS OF THE REMEDIATION AREA CONDUCTED ON AUGUST 12 AND 13, 2002.
- ▩ - APPROXIMATE LIMITS OF THE REMEDIATION AREA CONDUCTED ON AUGUST 20, 2002 EXTENDED VERTICALLY AND HORIZONTALLY.

SAMPLE # (Depth ft.)	DATE	CONTAMINANT	CONCENTRATION (mg/kg)	RDCSCC	NRDCSCC
R-1 (0-0.5)	08/01/2002	PCBs	1.4	0.49	2
R-1A (0-0.5)			0.4		
R-1B (0-0.5)			0.44		
R-1C (0-0.5)	08/05/2002		2.1		
R-1D (0-0.5)			0.71		
R-1DEEP (1-1.5)			0.012		

SAMPLE # (Depth ft.)	DATE	CONTAMINANT	CONCENTRATION (mg/kg)	RDCSCC	NRDCSCC
SW-1 (1.5-2.0)	08/13/2002	PCBs (Aroclor-1254)	3.3	0.49	2
SW-2 (1.5-2.0)			1.3		
FLOOR (2.0-2.5)			4.8		

SAMPLE # (Depth ft.)	DATE	CONTAMINANT	CONCENTRATION (mg/kg)	RDCSCC	NRDCSCC
R1-PE1 (0.5-1.0)	08/12/2002	PCBs (Aroclor-1254)	1.8	0.49	2
R1-PE2 (1.5-2.0)			0.18		
R1-PE3 (3.0-3.5)			0.091		
R1-PE4 (1.5-2.0)			1.5		
R1-PE5 (0.5-1.0)			1.3		
R1-PE6 (0.5-1.0)			3.1		
R1-PE7 (0.5-1.0)			3.1		
R1-PE8 (0.5-1.0)			2.7		
R1-PE9 (1.5-2.0)			1.3		
R1-PE10 (4.5-5.0)			ND		

SAMPLE # (Depth ft.)	DATE	CONTAMINANT	CONCENTRATION (mg/kg)	RDCSCC	NRDCSCC
R1-PE11 (2.0-2.5)	08/20/2002	PCBs (Aroclor-1254)	6.1	0.49	2
R1-PE12 (2.0-2.5)			ND		
R1-PE13 (2.0-2.5)			0.67		
R1-PE14 (2.0-2.5)			2.4		
R1-PE15 (2.0-2.5)			ND		
R1-PE16 (3.5-4.0)			ND		
R1-PE17 (2.0-2.5)			1.4		
R1-PE18 (3.0-3.5)			ND		
SW-3 (1.5-2.0)			1.5		
FLR-1 (2.0-2.5)			ND		
FLR-2 (2.0-2.5)			0.27		
SW-4 (1.5-2.0)			ND		

SITE PLAN PROVIDED BY:  
SURVEY OF A PORTION OF VETERANS MEMORIAL PARK, BLOCK 260, PORTION OF LOT 15.01 & 15.02  
MIDDLESEX COUNTY  
SITUATED IN THE TOWNSHIP OF OLD BRIDGE, MIDDLESEX COUNTY, NEW JERSEY  
PREPARED FOR: PMK GROUP  
0730 787 8000 CONSULTING AND MUNICIPAL ENGINEERS (730) 445 7400  
0730 787 8000 CONSULTING AND MUNICIPAL ENGINEERS (730) 445 7400  
NOTES:  
1. THIS SURVEYOR IS NOT QUALIFIED TO MAKE A DETERMINATION AS TO THE EXISTENCE OR NON-EXISTENCE OF ENVIRONMENTALLY UNDESIRABLE CONDITIONS. THEREFORE, NO STATEMENT IS BEING MADE OR IMPLIED HEREON, NOR SHOULD IT BE ASSUMED OR CONSTRUED THAT ANY STATEMENT IS BEING MADE BY THE FACT THAT NO EXISTENCE OF ENVIRONMENTALLY UNDESIRABLE CONDITIONS ARE PORTRAYED HEREON. THE CLIENT SHOULD PURSUE THESE MATTERS SEPARATE AND APART FROM THIS SURVEY.  
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LEGEND:  
TP-6 - INDICATES TEST PIT LOCATION  
FLAG - INDICATES FLAG LOCATION  
B-4 - INDICATES BOARING LOCATION  
WL WD-1 - INDICATES WETLANDS FLAG LOCATION  
SCALE: 1"=10'

CAD FILE		GNV\0502014\0502014-pcb_contmap.dwg	

VETERANS MEMORIAL PARK  
CHURCH STREET & KAINE AVENUE  
SOUTH PLAINFIELD, NEW JERSEY

CONTAMINANT DISTRIBUTION MAP (PCBs)

PMK Group  
CONSULTING & ENVIRONMENTAL ENGINEERS  
65 Jackson Drive, Cranford, New Jersey 07016  
(908) 487-9100 \* Fax: (908) 487-9134 \* www.PMKGroup.com  
DRAWN BY: AH, DATE: 10-16-02  
CHECKED BY: JV, SCALE: 1"=10'  
PROJECT NO: 0502014, PLATE NUMBER: 5b

PROFESSIONAL ENGINEER CERT. No. \_\_\_\_\_  
DATE: \_\_\_\_\_ CERTIFICATE OF AUTHORIZATION #GA277039